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WQSELEH

(TM)

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MPSrch\_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Thu Dec 23 10:27:14 1999; MasPar time 3.30 Seconds  
Tabular output not generated. 38.638 Million cell updates/sec

Title: >US-09-177-843-2  
Description: (1-6) from US09177843.ppe  
Perfect Score: 41  
Sequence: 1 GRGESP 6

Scoring table: PAM 150  
Gap 15

Searched: 170751 seqs, 21266608 residues

Post-processing: Minimum Match 0%  
Listing first 1000 summaries  
Maximum DB seq length 6

Database: a-geneseq35

1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7  
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13  
14:part14 15:part15 16:part16 17:part17 18:part18  
19:part19 20:part20 21:part21 22:part22 23:part23  
24:part24 25:part25 26:part26 27:part27 28:part28  
29:part29 30:part30 31:part31 32:part32 33:part33  
34:part34 35:part35 36:part36 37:part37 38:part38  
39:part39

Statistics: Mean 13.673; Variance 32.713; scale 0.418

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description	Pred. No.
1	41	100.0	6	39	Peptide used in gel c	7.31e+01
2	41	100.0	6	36	Peptide useful for al	7.31e+01
3	41	100.0	6	19	Control peptide used	7.31e+01
4	41	100.0	6	14	Integrin binding cont	7.31e+01
5	41	100.0	6	18	Control synthetic pep	7.31e+01
6	41	100.0	6	1	Antiviral agent.	7.31e+01
7	41	100.0	6	13	Control hexapeptide t	7.31e+01
8	41	100.0	6	25	Control peptide.	7.31e+01
9	41	100.0	6	18	Alpha(5)-Beta(1) inte	7.31e+01
10	41	100.0	6	28	Peptide SEQ ID NO:2 f	7.31e+01
11	40	97.6	6	39	Peptide used in gel c	9.97e+01
12	40	97.6	6	35	Peptide sequence of t	9.97e+01
13	40	97.6	6	35	Cyclo(1,6)-Gly-Arg-Gl	9.97e+01
14	40	97.6	6	7	Peptide for isolating	9.97e+01
15	40	97.6	6	29	Control peptide #7.	9.97e+01

6	5	R27033	Peptide lipid contg.	9.97e+01
6	14	R79077	Alpha5/betal integrin	9.97e+01
6	21	W15598	Platelet aggregation	9.97e+01
6	31	W48597	Integrin receptor ant	9.97e+01
6	28	W45490	Targeting ligand dire	9.97e+01
6	19	W01130	RGD peptide.1 for gli	9.97e+01
6	5	R29061	Peptide contg. RGD mo	9.97e+01
6	24	W25182	RGD-peptide capable o	9.97e+01
6	16	R94570	RGD peptide.	9.97e+01
6	6	R32421	GRGDSP synthetic pept	9.97e+01
6	5	R29054	Peptide lipid contg.	9.97e+01
6	36	W66818	Peptide useful for al	9.97e+01
6	31	W51239	Alpha v beta 3 recept	9.97e+01
6	7	R36046	Adhesion formation pr	9.97e+01
6	8	R44046	RGD peptide derivativ	9.97e+01
6	4	R24241	Activation independen	9.97e+01
6	5	R29070	Gelatin deriv. peptid	9.97e+01
6	6	R29158	PEG-contg. peptide de	9.97e+01
6	6	R23387	Fibrinogen fragment w	9.97e+01
6	5	R26807	Proten-amido peptide	9.97e+01
6	37	W70545	CS-1 peptide fragment	9.97e+01
6	2	R24212	Fragment of tenascin-	9.97e+01
6	31	W57198	RGD-containing sequen	9.97e+01
6	5	R29056	Peptide contg. RGD mo	9.97e+01
6	30	W45883	Peptide membrane bind	9.97e+01
6	19	W07431	Synthetic, weak, tumo	9.97e+01
6	19	W03680	Fibronectin elution p	9.97e+01
6	28	W34089	Beta-1 integrin cell	9.97e+01
6	33	W65003	Synthetic osteoclast	9.97e+01
6	5	R29063	Peptide contg. RGD mo	9.97e+01
6	7	R35465	Propene-amide deriv.	9.97e+01
6	17	R92740	RGD-containing sequen	9.97e+01
6	7	R37834	Cell adhesion motif e	9.97e+01
6	9	R49801	Sequence of peptide w	9.97e+01
6	5	R25425	Peptide deriv. contg.	9.97e+01
6	27	W35452	Non-dendritic peptide	9.97e+01
6	15	R80966	RGD contg. peptide us	9.97e+01
6	12	R70654	Synthetic RGD peptide	9.97e+01
6	7	R36708	Adhesion formation pr	9.97e+01
6	7	R36710	Adhesion formation pr	9.97e+01
6	11	R57890	Binding site derived	9.97e+01
6	5	R26814	Polyethylene glycol d	9.97e+01
6	14	R70478	Cancer metastasis inh	9.97e+01
6	17	R88570	RGD-containing sequen	9.97e+01
6	1	R04612	Antiviral agent.	9.97e+01
6	24	W25186	RGD-peptide capable o	9.97e+01
6	2	R06455	Fibronectin derived R	9.97e+01
6	13	R71456	Competitor fibronecti	9.97e+01
6	4	R22969	Cell adhesive peptide	9.97e+01
6	18	W03484	Alpha(5)-Beta(1) inte	9.97e+01
6	18	R99889	RGD-contg. synthetic	9.97e+01
6	5	R29068	Peptide contg. RGD mo	9.97e+01
6	16	R94571	RGD peptide.	1.84e+02
6	39	W84459	RGD peptide that stim	1.84e+02
6	7	R36709	Adhesion formation pr	1.84e+02
6	1	R04871	Peptide from fibronec	1.84e+02
6	19	W07430	Synthetic, preferred	1.84e+02
6	8	R47384	PH-30 beta disintegr	1.84e+02
6	2	R11506	Cell attachment promo	1.84e+02
6	7	R36711	Adhesion formation pr	2.48e+02
6	19	W07442	Synthetic, weak, tumo	2.48e+02
6	19	W25181	RGD-peptide capable o	2.48e+02
5	27	W43308	Control peptide.	8.05e+02
5	1	R04611	Antiviral agent.	8.05e+02
5	8	R47385	PH-30 beta disintegr	8.05e+02
5	12	R70655	Synthetic RGD peptide	8.05e+02
5	5	R26813	Polyethylene glycol d	8.05e+02
5	14	R70474	Cancer metastasis inh	8.05e+02
6	5	R25319	Cell contact inhibito	8.05e+02
6	31	W48518	Integrin receptor ant	8.05e+02
6	5	R29075	Gelatin deriv. peptid	8.05e+02
6	37	W65688	Conformationally cons	8.05e+02
6	36	W66827	Peptide useful for al	8.05e+02

89 33 80.5 6 31 W48577 Integrin receptor ant 8.05e+02  
90 33 80.5 6 16 R96371 RGD cyclic peptide, r 8.05e+02  
91 33 80.5 6 14 R70475 Cancer metastasis inh 8.05e+02  
92 32 78.0 5 7 R34451 Fibronectin-like bind 1.07e+03  
93 32 78.0 5 7 R36714 Adhesion formation pr 1.07e+03  
94 32 78.0 5 13 R62948 RGD contg. peptide is 1.07e+03  
95 32 78.0 5 10 R55076 Fibronectin gelatin b 1.07e+03  
96 32 78.0 5 8 R44045 RGD peptide derivativ 1.07e+03  
97 32 78.0 5 5 R24516 Platelet antagonist p 1.07e+03  
98 32 78.0 5 9 R48654 RGD containing peptid 1.07e+03  
99 32 78.0 5 8 R37131 RGD peptide deriv. #2 1.07e+03  
100 32 78.0 5 27 W33306 Epitope found on oste 1.07e+03  
101 32 78.0 5 31 W51241 Peptide which inhibit 1.07e+03  
102 32 78.0 5 5 R29051 Peptide lipid contg. 1.07e+03  
103 32 78.0 5 33 W50001 Synthetic angiogenesi 1.07e+03  
104 32 78.0 5 7 R35463 Propene-amide deriv. 1.07e+03  
105 32 78.0 5 14 R70477 Cancer metastasis inh 1.07e+03  
106 32 78.0 5 24 W51777 RGD-peptide capable o 1.07e+03  
107 32 78.0 5 1 R07442 Peptide with anti-met 1.07e+03  
108 32 78.0 5 5 R27030 Peptide lipid contg. 1.07e+03  
109 32 78.0 5 1 R04610 Antiviral agent. 1.07e+03  
110 32 78.0 6 9 R48653 RGD containing peptid 1.07e+03  
111 32 78.0 6 18 R92858 Fibronectin fragment 1.07e+03  
112 32 78.0 6 35 W79653 Cyclo(l-alpha, 6-gamm 1.07e+03  
113 32 78.0 6 37 W88569 Conformationally cons 1.07e+03  
114 32 78.0 6 8 R39600 Arg-Gly-Asp-contg. pe 1.07e+03  
115 32 78.0 6 14 R70482 Cancer metastasis inh 1.07e+03  
116 32 78.0 6 31 W56676 Peptide derived from 1.07e+03  
117 31 75.6 6 36 W66829 Peptide useful for al 1.42e+03  
118 31 75.6 6 16 R96377 RGD cyclic peptide, T 1.42e+03

Note: Post-processor removed 882 summaries from list due to search parameters chosen.

## ALIGNMENTS

RESULT 1  
ID W86168 standard; peptide; 6 AA.  
AC W86168;  
DE 04-MAR-1999 (first entry)  
DT Peptide used in gel contraction assays.  
KW Wound contraction; reduction; inhibition; tissue regeneration; scar;  
KW wound; joint motion; body deformation; gel contraction.  
OS Synthetic.  
PN US5851994-A.  
PD 22-DEC-1998.  
PF 06-JUN-1995; 473025.  
PR 06-JUN-1995; US-473025.  
PR 28-APR-1994; US-234979.  
PA (LJOL-) LA JOLLA CANCER RES FOUND.  
PI Polarek J, Schreiber R;  
DR WPI: 99-080478/07.  
PT Inhibition of wound contraction - with peptide derivatives rich in basic amino acids  
PS Example 2: Column 13; 16pp; English.  
CC The invention provides methods for reduction or inhibition of wound contraction that comprises administration of a peptide having more than 3 consecutive basic amino acid residues. Alternatively, the peptide contains the amino acid sequence Arg-Gly-Asp and a basic amino acid sequence, or the peptide comprises 6-30 amino acids in which at least 4 out of a sequence of 6 consecutive amino acids are basic amino acids. The method is used to allow normal tissue regeneration without excessive scar formation which, in the case of large wounds, can result in loss of joint motion or major body deformation. This peptide is used in gel contraction assays along with the claimed peptides (W86170-83) to determine the activity of a peptide to reduce or inhibit gel contraction.  
SQ Sequence 6 AA;

Query Match 100.0%; Score 41; DB 39; Length 6;  
Best Local Similarity 100.0%; Pred. No. 7.31e+01;  
Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgesp 6

QY 1 GRGESP 6  
|||||  
RESULT 2  
ID W66843 standard; peptide; 6 AA.  
AC W66843;  
DE 10-DEC-1998 (first entry)  
DT Peptide useful for altering bone resorption.  
KW bone resorption; pharmacore; angiogenesis; restenosis; integrin receptor;  
KW alpha v beta 3 integrin receptor; osteoclast.  
OS Synthetic.  
PN US5807819-A.  
PD 15-SEP-1998.  
PF 12-APR-1995; 421698.  
PR 12-APR-1995; US-421698.  
PR 15-APR-1994; US-227316.  
PR 08-SEP-1994; US-303052.  
PA (LJOL-) LA JOLLA CANCER RES CENT.  
PI Cheng S, Ingram R, Mullen D, Tschopp JF;  
DR WPI: 98-555601/47.  
PT Use of peptide derivatives which can alter integrin receptor binding - for altering bone resorption, treating angiogenesis or restenosis and altering integrin receptor mediated interactions  
PS Example 2; Figure 2A; 87pp; English.  
CC A new method is claimed for altering bone resorption. It comprises administration of a peptide of formula: X1X2X3X4GX5X6X7X8; where X1 = R1R2N or 0-10 amino acids (optionally protected by acetylation at the N-terminus); X2 = absent or 1 amino acid; X3 = absent or 1 or 2 amino acids; X4 = N-Me-Arg; X5 = residue which provides an ionic interaction with an integrin receptor, or is Msa, Psa or Tfsa; X6 = residue which has an aliphatic side chain; a non-natural amino acid that is hydrophobic; or Thr; X7 = a residue capable of forming a bond (i) with a bridging amino acid of X2, (ii) with X3 when X2 is absent, or (iii) with X4 when X2 and X3 are absent, to conformationally restrain the peptide; at X8 = NR3R4; OR5; or 0-10 amino acids, optionally protected as an amide at the C-terminus; R1, R3-R5 = H or alkyl; R2 = H, alkyl, alkyl-CO or phenyl-CO. The peptides are useful for inhibiting bone resorption, angiogenesis or restenosis, and for altering integrin receptor-mediated interactions, especially alpha v beta 3 integrin receptor-mediated binding of cells to a matrix. They may be used for reducing or inhibiting osteoclast binding to a matrix. The present sequence represents an example of a peptide disclosed in the specification.  
SQ Sequence 6 AA;

Query Match 100.0%; Score 41; DB 36; Length 6;  
Best Local Similarity 100.0%; Pred. No. 7.31e+01;  
Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgesp 6

|||||  
QY 1 GRGESP 6

RESULT 3  
ID W07429 standard; peptide; 6 AA.  
AC W07429;  
DE 21-JAN-1997 (first entry)  
DT Control peptide used in tumour invasion-inhibition assay.  
KW Tumour invasion; extracellular matrix; ECM; metastasis; RGD sequence;  
KW cancer; inhibition; control.  
OS Synthetic.  
PN US5547936-A.  
PD 20-AUG-1996.  
PF 22-NOV-1983; 554821.  
PR 22-NOV-1983; US-554821.  
PR 17-JUN-1985; US-744981.  
PR 10-MAR-1988; US-166530.  
PR 09-SEP-1988; US-242713.  
PR 25-FEB-1991; US-660526.  
PR 10-APR-1991; US-683585.  
PR 08-OCT-1991; US-773106.  
PR 19-JUN-1992; US-902742.

PA 17-DEC-1993: US-169743.  
 PA (LJOL-) LA JOLLA CANCER RES FOUND.  
 PI Gehlsen KR, Pierschbacher MD, Ruoslahti EI;  
 DR WPI; 96-392651/39.  
 PT Inhibiting tumour cell invasion through an extracellular matrix -  
 PT using peptide contg. the RGD sequence, partic. for preventing tumour  
 PT metastasis.  
 PS Example 3; Column 7-8; 8pp; English.  
 CC W07429 is a control peptide used in an assay for testing peptides  
 CC for tumour-invasion inhibitory activity. The peptides suspected of  
 CC having this ability contained the RGD sequence (Arg-Gly-Asp). The  
 CC control did not and was not expected to show any inhibitory action.  
 CC Other peptides tested (see W07430-W06433) did show inhibitory  
 CC activity, these peptides can be used to treat cancer and to prevent  
 CC metastasis, in partic. invasion of the extracellular matrix (ECM).  
 CC The peptides are also soluble.  
 SQ Sequence 6 AA;  
  
 Query Match 100.0%; Score 41; DB 19; Length 6;  
 Best Local Similarity 100.0%; Pred. No. 7.31e+01;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
 Db 1 grgesp 6  
 |||||  
 QY 1 GRGESP 6  
  
 RESULT 4  
 ID R79079 standard; peptide; 6 AA.  
 AC R79079;  
 DT 24-JAN-1996 (first entry)  
 DE Integrin binding control peptide.  
 KW High affinity; integrin binding peptide; alpha5/beta1; alphav/beta5;  
 KW alphav/beta3; RGD; stable configuration; wound healing;  
 KW osteoclast attachment; bone; angiogenesis; metastasis; tumour;  
 KW smooth muscle cell migration.  
 OS Synthetic.  
 PN W09514714-AL.  
 PD 01-JUN-1995.  
 PF 22-NOV-1994; US-13542.  
 PR 24-NOV-1993; US-158001.  
 PR 04-AUG-1994; US-286861.  
 PA (LJOL-) LA JOLLA CANCER RES FOUND.  
 PI Koivunen E, Ruoslahti E;  
 DR WPI; 95-206899/27.  
 PT High affinity integrin binding peptides - can be used to attach  
 PT cells to a substrate, inhibit the attachment of osteoclasts to bone,  
 PT promote wound healing, inhibit angiogenesis, metastasis of tumours  
 PT and migration of smooth muscle cells  
 PS Example 6; Page 29; 86pp; English.  
 CC The sequences given in R76185-200 and R79073-94 are high affinity  
 CC integrin binding peptides which bind to various integrins. Peptides  
 CC which bind to alpha5/beta1 integrins contain the motifs given in  
 CC R76185-86 and peptides which bind to alphav/beta5 and alphav/beta3  
 CC integrins contain the motif given in R76187. Alphav/beta5 integrins  
 CC are also bound by RGD containing peptides. These peptides assume a  
 CC conformationally stabilised configuration which is due to the  
 CC formation of a disulphide bond, a peptide bond or a lactam bond.  
 CC These peptides may be used for isolating the complementary integrin  
 CC from a sample mixture by contacting them under ionic conditions to  
 CC allow binding of the integrin to the peptide and then separating the  
 CC integrin from the peptide. They can be used for attaching cells to  
 CC a substrate, by binding them to the substrate with the cell. The  
 CC peptides promote wound healing when applied locally and inhibit the  
 CC attachment of osteoclasts to bone. They inhibit angiogenesis,  
 CC metastasis of tumours and migration of smooth muscle cells. This  
 CC peptide had no effect on integrin binding and was used as a control.  
 SQ Sequence 6 AA;  
  
 Query Match 100.0%; Score 41; DB 14; Length 6;  
 Best Local Similarity 100.0%; Pred. No. 7.31e+01;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgesp 6  
 |||||  
 QY 1 GRGESP 6  
  
 RESULT 5  
 ID R99890 standard; peptide; 6 AA.  
 AC R99890;  
 DT 05-NOV-1996 (first entry)  
 DE Control synthetic peptide ligand.  
 KW fibrinogen; blood clotting; GPIIb-IIIa receptor; binding; complex;  
 KW epitope; exposed; monoclonal antibody.  
 OS Synthetic.  
 PN US5470738-A.  
 PD 28-NOV-1995.  
 PF 08-JUL-1987; 070953.  
 PR 08-JUL-1987; US-070953.  
 PR 31-MAR-1988; US-175342.  
 PR 05-OCT-1989; US-417565.  
 PR 04-OCT-1993; US-131320.  
 PA (SCRI ) SCRIPPS RES INST.  
 PI Frelinger AL, Ginsberg MH, Plov EF;  
 DR WPI; 96-019874/02.  
 PT Monoclonal antibodies specific for ligand-bound GPIIb-IIIa receptor  
 PT - useful for detection of clotting disorders and thrombi  
 PS Example 5; Column 25; 20pp; English.  
 CC Monoclonal antibodies specific for a ligand-induced binding site on  
 CC GPIIa, esp. one induced in a platelet-associated GPIIb-IIIa/fibrinogen  
 CC complex are claimed. The MAb binds an epitope exposed upon binding of  
 CC the ligand and receptor. The epitope is not present on non-bound ligand  
 CC or receptor. The MABs are useful to prevent blood clotting and in  
 CC diagnostics. The present sequence is a synthetic peptide ligand used to  
 CC show the specificity of the antibody-binding only in association with  
 CC RGD-contg. ligands.  
 SQ Sequence 6 AA;  
  
 Query Match 100.0%; Score 41; DB 18; Length 6;  
 Best Local Similarity 100.0%; Pred. No. 7.31e+01;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
 Db 1 grgesp 6  
 |||||  
 QY 1 GRGESP 6  
  
 RESULT 6  
 ID R04613 standard; protein; 6 AA.  
 AC R04613;  
 DT 05-SEP-1990 (first entry)  
 DE Antiviral agent.  
 KW Antiviral; M2; poliovirus; polio; hepatitis.  
 OS Synthetic.  
 PN J02078631-A.  
 PD 19-MAR-1990. 228843.  
 PF 14-SEP-1988; JP-228843.  
 PR 14-SEP-1988; JP-228843.  
 PA (NIHA) Nippon Mining KK.  
 DR WPI; 90-129060/17.  
 PT Antiviral agent contg. tripeptide (unit) -  
 PT of basic aminoacid, then alanine, glycine or sarcosine, and  
 PT acidic aminoacid, effective against virus with protein-terminated DNA  
 PT or RNA.  
 PS Disclosure; 4pp; Japanese.  
 CC Peptide is effective against inhibiting propagation of DNA or RNA  
 CC bonded, protein containing viruses eg. Poliovirus, Hepatitis virus.  
 SQ Sequence 6 AA;  
  
 Query Match 100.0%; Score 41; DB 1; Length 6;  
 Best Local Similarity 100.0%; Pred. No. 7.31e+01;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
 Db 1 grgesp 6  
 |||||

QY 1 GRGESP 6

## RESULT 7

ID R71457 standard; peptide; 6 AA.  
 AC R71457;  
 DT 20-OCT-1995 (first entry)  
 DE Control hexapeptide to measure transmembrane force transfer.  
 KW fibronectin; cytoskeleton; transmembrane force transfer; diagnostic;  
 KW characterize cell; mechanical stimulation; ferromagnetic bead.  
 OS Synthetic.  
 PN WO9506248-A.  
 PD 02-MAR-1995.  
 PF 25-AUG-1994; U09685.  
 PR 25-AUG-1993; US-112757.  
 PA (CHIL-) CHILDRENS MEDICAL CENT.  
 PA (HARD ) HARVARD COLLEGE.  
 PI Butler JP, Fredberg JJ, Ingber DE, Wang N;  
 DR WPI: 95-106940/14.  
 PT System for applying mechanical loads to specific cell surface  
 PT molecules - using ferromagnetic beads coated with attachment  
 PT molecules, and alignment and twisting magnetic fields, e.g. for  
 PT screening therapeutic agents, toxins etc.  
 PS Example 1; Page 19; 42pp; English.  
 CC The system of the invention is used to determine the effect of  
 CC mechanical stimulation of mols. present on a cell surface.  
 CC Ferromagnetic microbeads are coated with attachment mols. eg. matrix  
 CC mols., etc. that physically interconnect with distinct cytoskeletal  
 CC proteins. A strong external magnetic field is applied to the beads, to  
 CC impose a defined mechanical stress. Transmembrane force transfer is  
 CC measured and the cells observed for changes in stiffening and twisting.  
 CC To demonstrate the specificity of transmembrane force transfer in  
 CC living endothelial cells, a soluble synthetic peptide (R71456) was  
 CC included in the culture medium as a competitor. The fibronectin  
 CC peptide inhibited cytoskeletal stiffening whereas this control  
 CC hexapeptide with a single amino acid substitution had no  
 CC inhibitory effects.  
 SQ Sequence 6 AA;

Query Match 100.0%; Score 41; DB 13; Length 6;  
 Best Local Similarity 100.0%; Pred. No. 7.31e+01;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgesp 6

QY 1 GRGESP 6

## RESULT 8

ID W11185 standard; Peptide; 6 AA.  
 AC W11185;  
 DT 15-JAN-1998 (first entry)  
 DE Control peptide.  
 KW Breast tumour homing peptide; cancer; in vivo panning; screening;  
 KW phage display; drug delivery.  
 OS Synthetic.  
 PN WO9710507-A1.  
 PD 20-MAR-1997.  
 PF 10-SEP-1996; U14600.  
 PR 11-SEP-1995; US-526710.  
 PR 11-SEP-1995; US-526708.  
 PA (LJOL-) LA JOLLA CANCER RES FOUND.  
 PI Pasqualini R, Ruoslahti E;  
 DR WPI: 97-202359/18.  
 PT Obtaining compound that homes to selected organ or tissue - by in  
 PT vivo panning method, specifically to identify brain, kidney,  
 PT angiogenic vasculature or tumour tissue homing peptide(s)  
 PS Example 3; Page 64; 75pp; English.  
 CC Coinjection of this synthetic breast tumour-homing peptide had no  
 CC effect on the amount of phage expressing the tumour homing peptide  
 CC in the tumour. Tumour homing peptides (see W13412-52) have been  
 CC selected using a novel in vivo panning method and are useful for

CC delivering e.g. toxins, drugs and labels to selected organs or  
 CC tissues.  
 SQ Sequence 6 AA;

Query Match 100.0%; Score 41; DB 25; Length 6;  
 Best Local Similarity 100.0%; Pred. No. 7.31e+01;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 Db 1 grgesp 6  
 QY 1 GRGESP 6

## RESULT 9

ID W03491 standard; peptide; 6 AA.  
 AC W03491;  
 DT 24-OCT-1996 (first entry)  
 DE Alpha(5)-Beta(1) integrin binding peptide 9.  
 KW Synthetic; fibronectin; vitronectin; integrin; binding motif; adhesion;  
 KW extracellular matrix protein; tumour metastasis.  
 OS Synthetic.  
 PN US5536814-A.  
 PD 16-JUL-1996.  
 PF 27-SEP-1993; 127422.  
 PR 27-SEP-1993; US-127422.  
 PR 11-MAR-1994; US-212186.  
 PA (LJOL-) LA JOLLA CANCER RES FOUND.  
 PI Koivunen E, Ruoslahti E;  
 DR WPI: 96-341556/34.  
 PT Synthetic integrin-binding peptide(s) - useful for inhibiting tumour  
 PT metastasis, etc.  
 PS Disclosure; Fig 4A; 16pp; English.  
 CC Peptides W03483-508 are examples of synthetic peptides generated to bind  
 CC to the fibronectin/vitronectin-binding integrin alpha(5)beta(1). They  
 CC are synthesised to contain the alpha(5)beta(1)-integrin peptide binding  
 CC motifs: DGR, NGR or RGD. The peptides interfere with the binding of  
 CC fibronectin and vitronectin to this integrin and thus may be used to  
 CC block integrin-mediated cell adhesion to extracellular matrix proteins,  
 CC esp. to inhibit tumour metastasis.  
 SQ Sequence 6 AA;

Query Match 100.0%; Score 41; DB 18; Length 6;  
 Best Local Similarity 100.0%; Pred. No. 7.31e+01;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgesp 6

QY 1 GRGESP 6

## RESULT 10

ID W34090 standard; peptide; 6 AA.  
 AC W34090;  
 DT 05-MAY-1998 (first entry)  
 DE Peptide SEQ ID NO:2 from W09739773 Example 1.  
 KW Beta-1 cell surface receptor; beta-1 integrin-binding domain;  
 KW cancer; tenascin; inflammation; receptor stimulator; fibrin;  
 KW inhibitor; leucocyte migration.  
 OS Unidentified.  
 PN WO9739773-A1.  
 PD 30-OCT-1997.  
 PF 22-APR-1997; U06577.  
 PR 22-APR-1996; US-635572.  
 PA (UYCO ) UNIV COLUMBIA NEW YORK.  
 PI Loike J, Silverstein SC;  
 DR WPI: 97-535582/49.  
 PT Treating infection caused by in-dwelling devices - also similar  
 PT methods for treating cancers coated with tenascin and treating  
 PT inflammation with receptor stimulators  
 PS Example 1; Page 27; 91pp; English.  
 CC A novel method has been developed for treating infection caused by  
 CC bacteria on the surface of an in-dwelling foreign body, over and  
 CC around which fibrin has been deposited. The method comprises

CC administration of an agent that inhibits signalling mediated by a  
 CC beta 1-integrin cell surface receptor on leucocytes. The agent enhances  
 CC migration of leucocytes in and through the fibrin so that they can  
 CC reach and kill the bacteria. The present sequence represents a  
 CC peptide which is mentioned but not used in the present invention.  
 CC Treatment with the agent overcomes the inhibitory effects of  
 CC fibrin or tenascin on leucocyte migration.  
 CC Sequence 6 AA;  
 SQ

Query Match 100.0%; Score 41; DB 28; Length 6;  
 Best Local Similarity 100.0%; Pred. No. 7.31e+01;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgsp 6  
 |||||  
 QY 1 GRGESP 6

RESULT 11  
 ID W86167 standard; peptide; 6 AA.  
 AC W86167;  
 DT 04-MAR-1999 (first entry)  
 DE Peptide used in gel contraction assays.  
 KW Wound contraction; reduction; inhibition; tissue regeneration; scar;  
 OS wound; joint motion; body deformation; gel contraction.  
 OS Synthetic.  
 PN US851994-A.  
 PD 22-DEC-1998.  
 PF 06-JUN-1995; 473025.  
 PR 06-JUN-1995; US-473025.  
 PR 28-APR-1994; US-234979.  
 PA (JUL-) LA JOLLA CANCER RES FOUND.  
 PI Polarek J, Schreiber R;  
 DR WPI; 99-080478/07.  
 PT Inhibition of wound contraction - with peptide derivatives rich in  
 PT basic amino acids  
 PS Example 2; Column 13; 16pp; English.  
 CC The invention provides methods for reduction or inhibition of wound  
 CC contraction that comprises administration of a peptide having more than  
 CC 3 consecutive basic amino acid residues. Alternatively, the peptide  
 CC contains the amino acid sequence Arg-Gly-Asp and a basic amino acid  
 CC sequence, or the peptide comprises 6-30 amino acids in which at least  
 CC 4 out of a sequence of 6 consecutive amino acids are basic amino acids.  
 CC The method is used to allow normal tissue regeneration without excessive  
 CC scar formation which, in the case of large wounds, can result in loss of  
 CC joint motion or major body deformation. This peptide is used in gel  
 CC contraction assays along with the claimed peptides (W86170-83) to  
 CC determine the activity of a peptide to reduce or inhibit gel contraction.  
 CC Sequence 6 AA;  
 SQ

Query Match 97.6%; Score 40; DB 39; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgsp 6  
 |||||  
 QY 1 GRGESP 6

RESULT 12  
 ID W1248 standard; Peptide; 6 AA.  
 AC W1248;  
 DT 18-NOV-1998 (first entry)  
 DE Peptide sequence of the invention.  
 KW Hepatitis drug; integrin inhibitor; integrin binding; VLA-4; treatment;  
 KW hepatitis.  
 OS Synthetic.  
 PN WO9837914-A1.  
 PD 03-SEP-1998.  
 PF 26-FEB-1998; J00802.  
 PR 26-FEB-1997; JP-042493.  
 PA (TORA ) TORAY IND INC.  
 PI Kainoh M, Moriya K, Tanaka T;

DR WPI; 98-480938/41.  
 PT Integrin inhibitors including antibodies, proteins, nucleic acids,  
 PT saccharide(s), capable of binding to integrin(s) as active  
 PT ingredient in remedies - for treating hepatitis, by inhibiting cell  
 PT adhesion  
 PS Example 4; Page 19; 35pp; Japanese.  
 CC The present sequence is used in the course of the invention. The  
 CC specification describes hepatitis drugs which contain integrin  
 CC inhibitors as the active ingredient. These integrin inhibitors include  
 CC antibodies, proteins, polypeptides, peptides, nucleic acids, saccharides,  
 CC and their derivatives. They also include low molecular weight compounds  
 CC capable of binding to integrins (e.g. alpha chain type with alpha 1,  
 CC alpha 2, etc., or beta chain type with beta 1, beta 2, etc.),  
 CC particularly anti-VLA-4 antibody, VLA-4 inhibiting peptides and low  
 CC molecular weight VLA-4 inhibiting compounds. The products can be used  
 CC for treating hepatitis.  
 CC Sequence 6 AA;  
 SQ

Query Match 97.6%; Score 40; DB 35; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgsp 6  
 |||||  
 QY 1 GRGESP 6

RESULT 13  
 ID W79658 standard; peptide; 6 AA.  
 AC W79658;  
 DT 08-DEC-1998 (first entry)  
 DE Cyclo(1,6)-Gly-Arg-Gly-Asp-Ser-Pro.  
 KW Platelet aggregation inhibitor; antithrombotic; antimetastatic; cyclic.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT Modified\_site 1..6  
 FT /note= "the alpha-amino group of Gly(1) is condensed  
 FT with the carboxy of Pro(6) to give a cyclic molecule."  
 FT US5643872-A.  
 PN 01-JUL-1997.  
 PD 26-AUG-1994; 296621.  
 PR 19-DEC-1990; US-630124.  
 PR 23-OCT-1989; US-425906.  
 PR 28-SEP-1990; US-590635.  
 PR 26-AUG-1994; US-296621.  
 PA (SMIK ) SMITHKLINE BEECHAM CORP.  
 PI Ali FE, Samanen JM;  
 DR WPI; 97-350267/32.  
 PT New peptide derivatives - are useful in inhibiting platelet  
 PT aggregation and clot formation, and for inhibiting reocclusion of  
 PT blood vessels following fibrinolytic therapy.  
 PS Disclosure; Column 7; 28pp; English.  
 CC The patent describes new cyclic peptides which have a core of formula  
 CC -B-Gly-Asp-, where B = a D- or L-amino acid chosen from Arg, Harg  
 CC (i.e. homocysteine), (Me2)Arg, (Et2)Arg and Lys (or an alpha-substituted  
 CC derivative of these). Cyclisation is effected through specific types of  
 CC covalent linkages. The cyclic peptides are platelet aggregation and clot  
 CC formation inhibitors. They may be used in treatment of acute myocardial  
 CC infarction, deep vein thrombosis, pulmonary embolism, dissecting  
 CC aneurysm, transient ischaemic attack, stroke, unstable angina,  
 CC disseminated intravascular coagulation, septicemia, surgical or  
 CC infectious shock, post-operative and post-partum trauma, cardiopulmonary  
 CC bypass surgery, incompatible blood transfusion, abruptio placenta,  
 CC thrombotic thrombocytopenic purpura, snake venom and immune diseases.  
 CC They may also be used for inhibiting reocclusion of blood vessels  
 CC following fibrinolytic therapy. They may also be used in prevention of  
 CC metastatic conditions.  
 CC The present sequence is a specific example of the new peptides.  
 CC Sequence 6 AA;  
 SQ

Query Match 97.6%; Score 40; DB 35; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgsp 6  
 |||||  
 QY 1 GRGESP 6



CC R76185-86 and peptides which bind to alphav/beta5 and alphav/beta3  
 CC integrins contain the motif given in R76187. Alphav/beta5 integrins  
 CC are also bound by RGD containing peptides. These peptides assume a  
 CC conformationally stabilised configuration which is due to the  
 CC formation of a disulphide bond, a peptide bond or a lactam bond.  
 CC These peptides may be used for isolating the complementary integrin  
 CC from a sample mixture by contacting them under ionic conditions to  
 CC allow binding of the integrin to the peptide and then separating the  
 CC integrin from the peptide. They can be used for attaching cells to  
 CC a substrate, by binding them to the substrate with the cell. The  
 CC peptides promote wound healing when applied locally and inhibit the  
 CC attachment of osteoclasts to bone. They inhibit angiogenesis,  
 CC metastasis of tumours and migration of smooth muscle cells.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 14; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgasp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 18  
 ID W15598 standard; peptide; 6 AA.  
 AC W15598;  
 DT 11-JUN-1997 (first entry)  
 DE Platelet aggregation inhibitor #22.  
 KW Platelet aggregation inhibitor; RGD analogue; cyclic peptide; fibrinogen;  
 KW hydrophobically enhanced analogue; blood platelet; endothelial surface;  
 KW blood vessel; serum protein; GP IIb/IIIa glycoprotein complex; integrin;  
 KW plasma membrane; thrombosis; cell adhesion receptor; fibronectin;  
 KW vitronectin receptor; vascular graft occlusion; therapy.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT modified\_site 1..6 /note= "forms peptide bond to create cyclic peptide"

PN US5612311-A.  
 PD 18-MAR-1997.  
 PF 06-APR-1990; 506444.  
 PR 05-APR-1990; US-506444.  
 PR 05-APR-1991; US-881119.  
 PR 14-APR-1993; US-050736.  
 PR 02-MAR-1994; US-204817.  
 PR 22-DEC-1994; US-363963.  
 PA (LJOL-) LA JOLLA CANCER RES FOUND.  
 PI Cheng S, Craig WS, Lukeman DS, Pierschbacher MD;  
 PI Tschopp JF;  
 DR WPI; 97-192139/17.  
 PT RGD-contg. peptide(s) that inhibit platelet aggregation - useful for  
 PT treating thrombosis  
 PS Example 5; Column 39; 50pp; English.  
 CC W15576-W15695 represent platelet aggregation inhibitors. All of these  
 CC sequences are hydrophobically enhanced RGD peptide analogues. The  
 CC interaction of blood platelets with the endothelial surface of injured  
 CC blood vessels and with other platelets (platelet aggregation) is a major  
 CC factor in the course of development of thrombi. Thrombosis is a serious  
 CC condition which can cause tissue damage and eventually death (if  
 CC untreated). Platelet aggregation is dependent upon the binding of  
 CC fibrinogen and other serum proteins to the GP IIb/IIIa glycoprotein  
 CC complex on the platelet plasma membrane. GP IIb/IIIa is a member of the  
 CC integrin family of cell adhesion receptors, which are known to recognise  
 CC a RGD tripeptide recognition sequence. The peptides inhibit platelet  
 CC aggregation without prolonging bleeding time. These sequences have high  
 CC affinity for the IIb/IIIa receptor and low affinity for the fibronectin  
 CC and vitronectin receptors. The peptides are used as platelet aggregation  
 CC inhibitors for treating thrombosis and vascular graft occlusion.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 21; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgasp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 19  
 ID W48597 standard; peptide; 6 AA.  
 AC W48597;  
 DT 18-AUG-1998 (first entry)  
 DE Integrin receptor antagonist peptide 136.  
 KW Integrin receptor antagonist; cell adhesion modulator; leukocyte;  
 KW extracellular matrix; fibronectin; ARDS; thrombosis; inflammation.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT Modified\_site 1..6 /note= "Gly is conjugated to Pro"  
 FT Modified\_site 1..2 /note= "Gly is linked to Arg by a pseudo-CH2.NH linkage"

PN US5721210-A.  
 PD 24-FEB-1998.  
 PF 07-JUN-1995; 485019.  
 PR 04-JUN-1993; US-961889.  
 PR 09-JUL-1990; US-550330.  
 PR 09-JUL-1991; WO-004862.  
 PR 07-JUN-1995; US-485019.  
 PA (TANA) TANABE SEIYAKU CO.  
 PI Cardarelli PM, Chiang S, Lobl TJ;  
 PI WPI; 98-168442/15.  
 DR New cyclic peptide(s) and peptidomimetic compounds - are integrin  
 PT receptor antagonists useful in modulating cell adhesion.  
 PS Disclosure; Column 38; 32pp; English.  
 CC The present sequence represents a synthetic peptide which  
 CC acts as an antagonist to integrin receptors. Some of the residues  
 CC are in reverse orientation which means that the normal carboxyl to  
 CC amino direction of peptide bond formation in the amino acid backbone  
 CC has been reversed such that the amino portion of the peptide bond  
 CC precedes the carbonyl portion. The invention provides various synthetic  
 CC peptides which act as cell adhesion modulators because they mimic  
 CC extra-cellular matrix ligands or other cell adhesion ligands that bind  
 CC to receptors such as integrin receptors, including fibronectin,  
 CC laminin, LFA-1, MAC-1, p150,95, vitronectin and gpIIb/IIIa receptors.  
 CC Some of the peptides contain the amino acid sequence Arg-Gly-Asp (RGD).  
 CC Others contain non-RGD sequences, for e.g RCD sequences, and reverse  
 CC orientation forms of amino acid residues. The synthetic peptides  
 CC are useful in modulating cell adhesion, including adhesion related to  
 CC fibronectin, as well as leukocyte adhesion to endothelial cells. They  
 CC are also claimed to be useful in the study, diagnosis, treatment or  
 CC prevention of diseases which relate to cell adhesion, e.g. adult  
 CC respiratory distress syndrome (ARDS), thrombosis and inflammatory  
 CC conditions.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 31; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgasp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 20  
 ID W45490 standard; peptide; 6 AA.  
 AC W45490;  
 DT 20-MAY-1998 (first entry)  
 DE Targeting ligand directed to the glycoprotein GPIIb/IIIa receptor.  
 KW Contrast agent; targeted composition; diagnosis; diseased tissue;  
 KW glycoprotein GPIIb/IIIa receptor.  
 OS Synthetic.  
 OS Homo sapiens.  
 PN WO9640285-A1.

PD 19-DEC-1996.  
 PF 06-JUN-1996; U09938.  
 PR 01-MAY-1996; US-640464.  
 PR 07-JUN-1995; US-497684.  
 PA (IMAR-) IMARX PHARM CORP.  
 PI Shen D, Unger EC, Wu G;  
 DR WPI; 97-077233/07.  
 PT Contrast agent or targeted compsn. for imaging or treating diseased  
 PT tissue - comprising lipid, protein or polymer, a gas, and a  
 PT targeting ligand e.g. a protein, peptide, saccharide or steroid  
 PS Disclosure; Page 55; 175pp; English.  
 CC This sequence represents a targeting ligand directed to the GPIIb/IIIa  
 CC receptor. The invention relates to a contrast agent for diagnostic  
 CC imaging or a target composition which comprises: (i) a lipid, protein or  
 CC polymer and (ii) a gas, in combination with (iii) a targeting ligand  
 CC (T1). T1 targets cells or receptors selected from myocardial,  
 CC endothelial, epithelial and tumour cells and the glycoprotein GPIIb/IIIa  
 CC receptor. Also claimed are: a composition comprising vesicles containing  
 CC (i) - (iii) and an aqueous carrier; a targeted vesicle composition  
 CC comprising a fluorinated gas and a targeting ligand (T1') which targets  
 CC tissues or receptors; a formulation for therapeutic or diagnostic use  
 CC comprising (i)-(iii) and a bioactive agent; and a method for providing an  
 CC image of an internal region of a patient, or for diagnosing the presence  
 CC of diseased tissue, comprising: (a) administration of a composition as  
 CC above; and (b) scanning the patient using ultrasound to obtain a visible  
 CC image of the region or diseased tissue. The methods and compounds are  
 CC useful for imaging or diagnosing the presence of diseased tissue,  
 CC especially myocardial, endothelial or epithelial tissue but also  
 CC gastrointestinal and cardiovascular regions. In particular the ligand  
 CC targets regions of arteriosclerosis. Stabilised vesicles are  
 CC particularly useful for perfusion imaging. The vesicles may also be used  
 CC to deliver active agents to an intended target such as tissue or a  
 CC receptor, and ultrasound can then be used to promote rupture of the  
 CC vesicles and release a bioactive or diagnostic agent.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 28; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESF 6

RESULT 21  
 ID W01130 standard; peptide; 6 AA.  
 AC W01130;  
 DT 18-DEC-1996 (first entry)  
 DE RGD peptide 1 for glia cell removal.  
 KW glia cell; neuron; analysis; behaviour; selective; removal.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT modified\_site 6 /note= "Pro-NH2"  
 FT J08073495-A.  
 PN 19-MAR-1996.  
 PD 31-AUG-1994; 232263.  
 PF 31-AUG-1994; JP-232263.  
 PR (AGENCY OF IND SCI & TECHNOLOGY.  
 PA (AGENCY OF IND SCI & TECHNOLOGY.  
 DR WPI; 96-205531/21.  
 PT Selective remover for glia cells from neuronal cell cultures -  
 PT useful for studying behaviour of neurons in the absence of glia  
 PT cells.  
 PS Claim 1; Page 2; 6pp; Japanese.  
 CC W01130-34 are RGD peptides which selectively remove glia cells in the  
 CC presence of neurons. This enables analysis of behaviour of neurons in  
 CC the absence of glia cells.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 19; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESF 6

RESULT 22  
 ID R29061 standard; peptide; 6 AA.  
 AC R29061;  
 DT 17-FEB-1993 (first entry)  
 DE Peptide contg. RGD motif as a side chain to a water sol. polymer.  
 KW Adhesive peptide; cell adhesion; inhibitor; platelet aggregation.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT modified\_site 1 /note= "alkylated/arylated"  
 FT modified\_site 6 /note= "alkylated/arylated"  
 FT J04221397-A.  
 PN 11-AUG-1992.  
 PD 20-DEC-1990; 404484.  
 PF 20-DEC-1990; JP-404484.  
 PR (FUJIF ) FUJIFILM PHOTO FILM CO LTD.  
 PA WPI; 92-313681/38.  
 DR Water-soluble vinyl polymer deriv.- for animal cell adhesion  
 PT inhibitor or platelet aggregation inhibitor  
 PS Example; Page 13; 14pp; Japanese.  
 CC The peptide sequence contains the Arg-Gly-Asp motif of a  
 CC adhering proteins. It comprises the essential unit of a  
 CC water-sol. vinyl polymer with a pref. mol. wt. of 3000-100,000 D.  
 CC The polymer shows various biological activities, e.g. immunological  
 CC coordination, wound healing action and platelet aggregation inhibiting  
 CC action etc. See also R29055-60.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 5; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESF 6

RESULT 23  
 ID W25182 standard; peptide; 6 AA.  
 AC W25182;  
 DT 05-JAN-1998 (first entry)  
 DE RGD-peptide capable of binding cell adhesion molecules.  
 KW RGD; arginine; glycine; aspartic acid; cell adhesion molecule;  
 KW binding; bladder irrigation; tumour removal; endoscopic operation;  
 KW transurethral resection; cancer; neoplasia.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT modified\_site 1 /label= MeGly  
 FT DE19529909-AL.  
 PN 20-FEB-1997.  
 PD 15-AUG-1995; 029909.  
 PF 15-AUG-1995; DE-029909.  
 PR (FREP ) FRESSENIUS AG.  
 PA Boehle A;  
 DR WPI; 97-133793/13.  
 PT Endoscopic irrigation solns. - contg. peptide(s) that bind to cell  
 PT adhesion molecules  
 PS Claim 5; Page 8; 8pp; German.  
 CC W25173-W25186 are peptides containing an RGD sequence or equivalent.  
 CC The peptides are capable of binding to cell adhesion molecules and  
 CC are used in aqueous irrigation solutions for use during and after  
 CC endoscopic operations. Preferred irrigation solutions are  
 CC electrolyte-free and contain 1 microg/ml to 100 mg/ml of one or more  
 CC oligopeptides containing the amino acid sequences: RGD, LDV, IDA, DGEA,  
 CC GPRP, VTL, YIGSR, KOAGDV and/or REDV (given in one letter amino acid



CC code). The solutions are especially used for irrigating the bladder  
 CC during and after tumour removal by transurethral resection. The  
 CC peptides protect against recurrence of tumours.

SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 24; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsdp 6  
 |||:|  
 QY 1 GRGESP 6

## RESULT 24

ID R94570 standard; Peptide; 6 AA.  
 AC R94570.  
 DT 21-JUN-1996 (first entry)  
 DE RGD peptide.  
 KW Cytotactin; neuron; neurite; cell attachment; cell elongation;  
 KW antibody.  
 OS Synthetic.  
 PN WO9608513-A.  
 PD 21-MAR-1996.  
 PF 14-SEP-1995; U11684.  
 PR 16-SEP-1994; US-308359.  
 PA (SCRI) SCRIPPS RES INST.  
 PI Crossin KL, Phillips G, Prieto AL;  
 DR WPI: 96-179904/18.  
 PT Cytotactin polypeptide(s), derivs. and antibodies - capable of  
 stimulating neuronal cell attachment, neurite out-growth and cell  
 elongation  
 PT Example 5; Page 81; 159pp; English.  
 PS RGD peptides (R94570 and R94571), inhibitors of cell attachment to  
 CC type I collagen, inhibited attachment of chicken fibroblasts to  
 CC cytotactin (see also R94547-48) by 73% and 70% respectively.  
 CC Inhibition was total when the peptides were used together with JG22,  
 CC a function-blocking monoclonal antibody against the beta-1 integrin.  
 CC This suggests that there are 2 integrin binding sites on cytotactin.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 16; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsdp 6  
 |||:|  
 QY 1 GRGESP 6

## RESULT 25

ID R32421 standard; peptide; 6 AA.  
 AC R32421.  
 DT 07-JUN-1993 (first entry)  
 DE GRGDSF synthetic peptide.  
 KW Laminin receptor binding.  
 OS Synthetic.  
 PN US5180809-A.  
 PD 19-JAN-1993.  
 PF 25-MAY-1989; 357354.  
 PR 20-MAY-1988; US-196986.  
 PR 25-MAY-1989; US-357354.  
 PA (LJOL-) LA JOLLA CANCER RES FOUND.  
 PI Engvall E, Gehlsen KR, Ruoslahti EI;  
 DR WPI: 93-052874/06.  
 PT New mammalian laminin adhesion receptor - used in analyses,  
 PT Prep. of antibodies and screening, partic. for study and treatment  
 PT of tumour cells  
 PS Example; Page 11; 15pp; English.  
 CC This is the synthetic peptide GRGDSF which was used in the isolation  
 CC of a laminin adhesion receptor. The peptide does not inhibit the  
 CC binding of laminin receptor liposomes to laminin.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 6; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsdp 6  
 |||:|  
 QY 1 GRGESP 6

## RESULT 26

ID R29054 standard; peptide; 6 AA.  
 AC R29054.  
 DT 17-FEB-1993 (first entry)  
 DE Peptide lipid contg. RGD.  
 KW Synthetic; cell migration; inhibitor; cell adhesion membrane; cell  
 KW culture body.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT modified\_site 1  
 FT modified\_site 6 /note= "acylated"  
 FT modified\_site 6 /note= "alkylated"  
 FT J04221394-A.  
 PN 11-AUG-1992.  
 PD 29-NOV-1990; 333335.  
 PR 26-OCT-1990; JP-289493.  
 PA (FUJF) FUJII PHOTO FILM CO LTD.  
 DR WPI: 92-313678/38.  
 PT New synthetic peptidic lipid(s) and salts - useful as cell  
 PT migration inhibitors, cell adhesion membranes or cell culture  
 PT bodies  
 PS Disclosure; Page 4; 9pp; Japanese.  
 CC The peptide sequence is an example of a highly generic sequence contg.  
 CC the RGD motif. Compounds contg. these lipid peptides are useful as  
 CC cell migration inhibitors in cell adhesion membranes or cell culture  
 CC bodies. See also R29048-53.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 5; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsdp 6  
 |||:|  
 QY 1 GRGESP 6

## RESULT 27

ID W66818 standard; peptide; 6 AA.  
 AC W66818.  
 DT 10-DEC-1998 (first entry)  
 DE Peptide useful for altering bone resorption.  
 KW bone resorption; pharmacore; angiogenesis; restenosis; integrin receptor;  
 KW alpha v beta 3 integrin receptor; osteoclast.  
 OS Synthetic.  
 PN US5807819-A.  
 PD 15-SEP-1998.  
 PF 12-APR-1995; 421698.  
 PR 12-APR-1995; US-421698.  
 PR 15-APR-1994; US-227316.  
 PR 08-SEP-1994; US-303052.  
 PA (LJOL-) LA JOLLA CANCER RES CENT.  
 PI Cheng S, Ingram R, Mullen D, Tschopp JF;  
 DR WPI: 98-55561/47.  
 PT Use of peptide derivatives which can alter integrin receptor binding  
 PT - for altering bone resorption, treating angiogenesis or restenosis  
 PT and altering integrin receptor mediated interactions  
 PS Example 2; Figure 2A; 87pp; English.  
 CC A new method is claimed for altering bone resorption. It comprises  
 CC administration of a peptide of formula:  $X1X2X3X4GX5X6X7X8$ ; where  $X1$  =  
 CC R1R2N or 0-10 amino acids (optionally protected by acetylation at the N-  
 CC terminus);  $X2$  = absent or 1 amino acid;  $X3$  = absent or 1 or 2 amino

CC acids: X4 = N-Me-Arg; X5 = residue which provides an ionic interaction  
CC with an integrin receptor, or is Msa, Psa or Tfss; X6 = residue which  
CC has an aliphatic side chain; a non-natural amino acid that is  
CC hydrophobic; or Thr; X7 = a residue capable of forming a bond  
CC bridging amino acid of X2, (ii) with X3 when X2 is absent, or (iii) with  
CC X4 when X2 and X3 are absent, to conformationally restrain the peptide;  
CC X8 = NR3R4; OR5; or 0-10 amino acids, optionally protected as an amide at  
CC the C-terminus; R1, R3-R5 = H or alkyl; R2 = H, alkyl, alkyl-CO or  
CC phenyl-CO. The peptides are useful for inhibiting bone resorption,  
CC angiogenesis or restenosis, and for altering integrin receptor-mediated  
CC interactions, especially alpha v beta 3 integrin receptor-mediated  
CC binding of cells to a matrix. They may be used for reducing or inhibiting  
CC osteoclast binding to a matrix. The present sequence represents an  
CC example of a peptide disclosed in the specification.  
SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 36; Length 6;  
Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
|||:|  
QY 1 GRGESP 6

RESULT 28  
ID W51239 standard; peptide; 6 AA.

AC W51239;  
DE 12-AUG-1998 (first entry)  
DT Alpha v beta 3 receptor inhibitor.  
DE Integrin alpha v beta 3 receptor; osteoporosis; restenosis; cancer;  
KW arthritis; diabetic; retinopathy; disulphide; inhibitor.  
OS Synthetic.  
PN US5767071-A.  
PD 16-JUN-1998.  
PR 07-JUN-1995; 482106.  
PR 07-JUN-1995; US-482106.  
PA (IXSV-) IXSVS INC.  
PI Huse WD, Lee BA, Palladino MA, Varner JA;  
DR WPI; 98-361749/31.  
PT New Non-RGD cyclic peptides that bind to integrin receptor - useful  
PT for treating e.g. osteoporosis, restenosis, cancer, arthritis and  
PT diabetic retinopathy  
PS Disclosure; Column 2; 23pp; English.  
CC The invention relates to cyclic, non Arg-Gly-Asp (non-RGD) peptides that  
CC bind to the alpha v beta 3 integrin receptor and have the sequence Arg  
CC Cys X1 Gly Asp Ser X2 Cys X3, where the cysteines are connected by a di-  
CC sulphide bond, X1 is Gly, Ser or Ala, and X2 and X3 are any amino acids.  
CC The peptides are useful for treating diseases involving alpha v beta 3  
CC receptors e.g. osteoporosis, restenosis, cancer, arthritis and diabetic  
CC retinopathy. The present sequence represents an Arg-Gly-Asp containing  
CC peptide.  
SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 31; Length 6;  
Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
|||:|  
QY 1 GRGESP 6

RESULT 29  
ID R36712 standard; peptide; 6 AA.

AC R36712;  
DT 26-AUG-1993 (first entry)  
DE Adhesion formation prevention RGD-contg. peptide.  
KW Tissue repair; peritoneum; surgery; post-surgically; inhibition;  
KW platelet aggregation; cardiovascular; orthopedic; thoracic;  
KW ophthalmic; CNS; use.  
OS Synthetic.  
FH Key Location/Qualifiers

FT modified\_site 1 /note= "n-methyl-Gly"  
PN W09308818-A.  
PD 13-MAY-1993.  
PF 06-NOV-1992; U09494.  
PR 07-NOV-1991; US-789231.  
PA (USC-) UNIV SOUTHERN CALIFORNIA.  
PI Dizerega GS, Rodgers RE;  
DR WPI; 93-167381/20.  
PT Prevention of adhesion formation, partic. post-surgically - comprises  
PT administering a RGD-contg. peptide for a time sufficient to permit  
PT tissue repair  
PS Example; Page 18; 22pp; English.  
CC The sequence is that of an RGD-contg. peptide which is used in a  
CC method for prevention of adhesion formation for a time sufficient  
CC to permit tissue repair. The method is used for minimising or  
CC preventing adhesion formation, partic. in the peritoneum following  
CC surgery, but also for e.g. cardiovascular, orthopedic, thoracic,  
CC ophthalmic, CNS and other uses. In addn, the peptide inhibits  
CC platelet aggregation and does not induce inflammation or trauma  
CC at the site of administration.  
SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 7; Length 6;  
Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
|||:|  
QY 1 GRGESP 6

RESULT 30  
ID R44046 standard; peptide; 6 AA.

AC R44046;  
DT 02-JUN-1994 (first entry)  
DE RGD peptide derivative #4.  
KW Drug; organ transplantation; rejection; immune disorder;  
KW systemic lupus.  
OS Synthetic.  
FH Key Location/Qualifiers  
FT modified\_site 1 /note= "C13H27CO-Gly"  
FT modified\_site 4 /note= "Pro-OH"  
FT J05255105-A.  
PN 05-OCT-1993.  
PD 16-MAR-1992; 058460.  
PF 16-MAR-1992; JP-058460.  
PR (FUJF ) FUJII PHOTO FILM CO LTD.  
PA WPI; 93-348360/44.  
DR Immuno-control drug for organ transplant rejection etc. contains  
PT peptide having arginine, glycine, aspartic acid sequence  
PS Disclosure; Page 3; 11pp; Japanese.  
CC The sequences given in R44043-47 and R53144 represent exmples of the  
CC claimed RGD containing peptide of the invention. These peptides all  
CC correspond to the generic formulae:  
CC R02-(CH2)m-C(O)-([X]-Arg-Gly-Asp-[Y])n-O-CH2CH(OH)CH(OH) or  
CC R3-([X]-Arg-Gly-Asp-[Y])n-2  
CC [X], [Y] = amino acid or peptide residues;  
CC m = 1-5;  
CC n = 1-5;  
CC R1, R2 = H or 8-24C acyl or alkyl;  
CC Z = 6-24C acyl;  
CC Z = hydroxyl or amino.  
CC These peptides form the active part of drugs which are used for the  
CC control of organ transplantation rejection or immune disorders such  
CC as systemic lupus.  
SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 8; Length 6;  
Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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Db      1 grgdsp 6
      111111
Qy      1 GRGESP 6

RESULT 31
ID R24241 standard; Protein; 6 AA.
AC R24241;
DT 01-DEC-1992 (first entry)
DE Activation independent ligand.
KW Platelet aggregation disorder; ligand binding; occupancy; competent.
OS Synthetic.
PN WO9208982-A.
PD 29-MAY-1992.
PF 15-NOV-1991; U08579.
PR 15-NOV-1990; US-614723.
PA (SCRI ) SCRIPPS RES INST.
PI Ginsberg MH;
DR WPI; 92-200317/24.
PT Rapid characterisation of platelet aggregation disorders - by
PT detecting levels of activation and ligand-occupancy competent
PT platelets, pref. by flow cytometry after reaction with labelled
PT antibodies
PS Claim 9: Page 70; 76pp; English.
CC The peptide is an activation independent ligand which is used as
CC part of a method for characterising a platelet aggregation defect in
CC a patient where the defect is an activation, ligand binding, or post
CC occupancy defect. It forms a ligand-induced binding site on normal
CC platelets which can be used to indicate the presence of ligand
CC occupancy competent platelets in a sample. The method provides rapid
CC characterisation of defects (less than 30 min. using platelet-rich
CC plasma or whole blood), gives improved definition of the defects and
CC requires only 0.5 ml of sample, conventional aggregation methods
CC require about 20-30 ml. See also R24239-R24242.
SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 4; Length 6;
Best Local Similarity 83.3%; Pred. No. 9.97e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db      1 grgdsp 6
      111111
Qy      1 GRGESP 6

RESULT 32
ID R29070 standard; peptide; 6 AA.
AC R29070;
DT 17-FEB-1993 (first entry)
DE Gelatin deriv. peptide contg. RGD motif.
KW Adhesive peptide; cell adhesion; inhibitor; platelet aggregation.
OS Synthetic.
FH Key Location/Qualifiers
FT modified_site 1 /note= "alkylated/arylated"
FT modified_site 6 /note= "alkylated/arylated"
FT FT
PN J04221400-A.
PD 11-AUG-1992.
PF 30-NOV-1990; 333719.
PR 26-OCT-1990; JP-289492.
PA (FUJF ) FUJI PHOTO FILM CO LTD.
DR WPI; 92-313683/38.
PT Gelatin deriv. with adhesive peptide side chain - used for animal
PT cell adhesion inhibitor and platelet aggregation-inhibition
PS Example; Page 12; 10pp; Japanese.
CC The gelatin deriv. contains the Arg-Gly-Asp motif of cell adhering
CC proteins. It comprises the essential unit of a water-sol. vinyl
CC polymer with a pref. mol. wt. of 3000-100,000 D. The polymer shows
CC various biological activities, e.g. immunological coordination, wound
CC healing action and platelet aggregation inhibiting action etc.
CC See also R29069-75.

Db      1 grgdsp 6
      111111
Qy      1 GRGESP 6

RESULT 33
ID R29158 standard; peptide; 6 AA.
AC R29158;
DT 15-APR-1993 (first entry)
DE PEG-contg. peptide deriv #1 comprising RGD-motif.
KW Cell adhesion; Polyethylene glycol; fibronectin.
OS Synthetic.
FH Key Location/Qualifiers
FT modified_site 1 /note= "acylated by ROCCH2(OCH2CH2)nOCH2CO-
FT modified_site 6 where R = GRGDSP and n = 1-150"
FT FT
FT /note= "opt. amidated and if so, R is also
FT amidated"
PN J04305597-A.
PD 28-OCT-1992.
PR 02-APR-1991; 068669.
PR 02-APR-1991; JP-068669.
PA (FUJF ) FUJI PHOTO FILM CO LTD.
DR WPI; 92-410149/50.
PT New peptide-contg. polyethylene glycol derivs. - used to inhibit
PT cancer metastasis or platelet aggregation and as lymphocyte
PT activators
PS Example 1: Page 3; 6pp; Japanese.
CC The polyethylene glycol-contg. peptide derivs. contain the
CC Arg-Gly-Asp (RGD) motif found in fibronectin. The derivs can be used
CC as platelet aggregation inhibitors, lymphocyte activators and cancer
CC metastasis inhibitors. See also R29159 and R33149.
SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 6; Length 6;
Best Local Similarity 83.3%; Pred. No. 9.97e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db      1 grgdsp 6
      111111
Qy      1 GRGESP 6

RESULT 34
ID R32387 standard; peptide; 6 AA.
AC R32387;
DT 01-JUL-1993 (first entry)
DE Fibrinogen fragment which binds to receptor.
KW Integrin; glycoprotein GpIIB/IIIa; platelet aggregation;
OS Synthetic.
PN WO9304079-A.
PD 04-MAR-1993.
PF 20-AUG-1992; U06933.
PR 21-AUG-1991; US-813315.
PA (RECE-) RECEPTOR LAB INC.
PI Hopfinger AJ, Le Breton G, Venton DL;
DR WPI; 93-093932/11.
PT Identifying peptide(s) which bond to predetermined targets - by
PT random degradation and recombination of peptide(s) and isolating
PT bound peptide(s)
PS Example 4; Page 65; 89pp; English.
CC The major cell surface integrin of platelets, GpIIB/IIIa, binds
CC fibrinogen. The hexapeptide motif GRGDSP in fibrinogen represents
CC the binding site.
SQ Sequence 6 AA;

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Query Match 97.6%; Score 40; DB 6; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 35  
 ID R26807 standard; peptide; 6 AA.  
 AC R26807;  
 DT 12-FEB-1993 (first entry)  
 DE Proten-amido peptide copolymer.  
 KW Tumor metastasis inhibitor; platelet aggregation; animal cell;  
 KW adhesion; wound healing; cell culture media.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT modified\_site 1  
 FT J04213311-A.  
 PN 04-AUG-1992.  
 PD 04-AUG-1992.  
 PE 29-MAR-1991; 066159.  
 PR 27-NOV-1990; JP-324610.  
 PA (FUJF) FUJII PHOTO FILM CO LTD.  
 DR WPI; 92-305482/37.  
 PT New copolymers of propen-amido peptide(s) - are tumour  
 PT metastasis, platelet aggregation and animal cell adhesion  
 PT inhibitors also useful as wound healing agents and cell culture  
 PT media  
 PS Example; Page 6; 14pp; Japanese.  
 CC The sequence is that of a propen-amido peptide copolymer, it and its  
 CC salts are water soluble and is useful as a tumour metastasis  
 CC inhibitor, a platelet aggregation inhibitor, an animal cell adhesion  
 CC inhibitor, a wound healing agent and cell culture media.  
 CC See also R26805-R26808.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 5; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 36  
 ID W70545 standard; peptide; 6 AA.  
 AC W70545;  
 DT 26-JAN-1999 (first entry)  
 DE CS-1 peptide fragment 3 (a fibronectin fragment).  
 KW Integrin; alpha-4 chain; immunoglobulin; chimeric; heterodimer complex;  
 KW inhibitor; binding; ligand; blood platelet; hemostatic; diagnostic agent;  
 KW CS-1; fibronectin.  
 OS Synthetic.  
 PN W09832771-A1.  
 PD 30-JUL-1998.  
 PE 29-JAN-1998; J00370.  
 PR 29-AUG-1997; JP-234544.  
 PR 29-JAN-1997; JP-015118.  
 PA (TORA) TORAY IND INC.  
 PI Kainoh M, Tanaka T;  
 DR WPI; 98-427881/36.  
 PT Integrin-immunoglobulin chimeric protein heterodimer complexes as  
 PT platelet substitutes - contain the alpha and beta integrin chains  
 PT associated in stable state and bind to extracellular matrix in the  
 PT presence of plasma components  
 PS Example 10; Page 30; 87pp; Japanese.  
 CC Sequences W70543 to W70545 represent CS-1 peptide fragments used during  
 CC the course of the invention. The invention provides integrin-  
 CC immunoglobulin chimeric protein heterodimer complexes that comprise an

CC integrin alpha or beta chain associated with an immunoglobulin light or  
 CC heavy chain. These chimeric proteins form heterodimer complexes, in  
 CC particular with a chimeric protein containing an integrin alpha chain and  
 CC an immunoglobulin chain with a chimeric protein containing an integrin  
 CC beta chain and an immunoglobulin chain; the immunoglobulin chain in each  
 CC case may be a heavy chain, or one of the two may be a light chain. The  
 CC integrin alpha chain is preferably alpha 4 or alpha 2 and the integrin  
 CC beta chain is preferably beta 1. Animal cells transformed with vectors  
 CC containing the DNA coding for the above chimeric proteins can be used in  
 CC the preparation of the chimeric proteins and their heterodimer complexes.  
 CC The heterodimer complexes, which are useful for testing potential  
 CC promoters and inhibitors of the binding of integrins to their ligands,  
 CC function as blood platelet substitutes and hemostatics and as diagnostic  
 CC agents.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 37; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 37  
 ID R24212 standard; Protein; 6 AA.  
 AC R24212;  
 DT 18-NOV-1992 (first entry)  
 DE Fragment of tenascin-related peptide.  
 KW tenascin; related peptide; cell attachment; antibody; angiogenesis;  
 KW tumor metastasis; solid matrix; prosthetic device; vascular graft;  
 PN W09207872-A.  
 PD 14-MAY-1992.  
 PE 29-OCT-1991; U08018.  
 PR 29-OCT-1990; US-605920.  
 PR 30-OCT-1990; US-605667.  
 PA (CALB-) CALIFORNIA INST BIOLOGICAL RES.  
 PI Bourdon WA;  
 DR WPI; 92-183625/22.  
 PT New tenascin-related peptides - modulate cell attachment to  
 PT tenascin, useful in inhibition of tumour metastasis and  
 PT angiogenesis  
 PS Disclosure: page 8; 60pp; English.  
 CC The peptide may form an N- or C-terminal fragment of the generic  
 CC peptide of R24192, which is a tenascin-related peptide. This  
 CC peptide mimics the ability of tenascin to promote cell attachment.  
 CC The peptide and antibodies raised to it can be used to modulate cell  
 CC attachment to tenascin, esp. to inhibit tumour metastasis and  
 CC angiogenesis. The peptide is pref. attached to a solid matrix, eg  
 CC collagen, nitrocellulose, polyester, glass, synthetic resin, long-chain  
 CC polysaccharide or synthetic resin fibre. It is esp. operatively linked  
 CC to a solid matrix forming a prosthetic device, percutaneous device,  
 CC vascular graft, etc. For topical admin. it is formulated into a  
 CC lotion, salve, gel, colloid, powder etc.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 2; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 38  
 ID W57198 standard; peptide; 6 AA.  
 AC W57198;  
 DT 05-AUG-1998 (first entry)  
 DE RGD-containing peptide SEQ ID NO:16 from W09812226 Example 9.  
 KW Fibronectin; superfibronectin; first type III repeat unit; IIII;

KW angiogenesis; psoriasis; rheumatoid arthritis; cancer; tumour.  
 OS Synthetic.  
 PN W09812226-A1.  
 PD 26-MAR-1998.  
 PF 12-SEP-1997; U16344.  
 PR 20-SEP-1996; US-717169.  
 PA (BURN-) BURNHAM INST.  
 PI Pasqualini R, Ruoslahti E;  
 DR WPI; 98-217210/19.  
 PT Inhibition of angiogenesis by superfibronectin - useful for  
 PT treating, e.g. psoriasis, rheumatoid arthritis and various cancers  
 PS Example 9; Page 63; 105pp; English.  
 CC A method has been developed of ameliorating cancer, or inhibiting  
 CC angiogenesis, in a subject. The method comprises administering a  
 CC superfibronectin or a superfibronectin-generating compound. The  
 CC present sequence represents a peptide used in an example of the  
 CC present invention. The method can be used to treat cancer, ocular  
 CC neovascularisation, diabetic retinopathy, haemangioma, rheumatoid  
 CC arthritis, psoriasis, granuloma, and granulation tissue. The cancer  
 CC treated by the method can comprise a solid tumour, such as a melanoma,  
 CC osteosarcoma, ovarian, vascular or epithelial cell tumour. When it is in  
 CC an epithelial cell tumour, it is preferably a colon carcinoma, breast  
 CC carcinoma, or ovarian carcinoma. When it is a vascular cell tumour, it is  
 CC selected from haemangiomas, Kaposi's sarcoma, lymphangioma, glomangioma,  
 CC angiosarcoma, or haemangioendothelioma. The method inhibits or prevents  
 CC a tumour cell metastasis in a subject especially inhibits the tumour  
 CC cell migration, attachment, or inhibiting growth of a tumour cell in a  
 CC subject having a pathology with an angioproliferative component, where  
 CC the inhibition causes regression of the pathology. The route of  
 CC administration is intravenous, intramuscular, intradermal, subcutaneous,  
 CC intracranial, intracerebrospinal, epidural, topical or oral  
 CC administration.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 31; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

DB 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 39  
 ID R29056 standard; peptide; 6 AA.  
 AC R29056;  
 DT 17-FEB-1993 (first entry)  
 DE Peptide contg. RGD motif as a side chain to a water sol. polymer.  
 KW Adhesive peptide; cell adhesion; inhibitor; platelet aggregation.  
 OS Synthetic.  
 FH Key  
 FT modified\_site 1 Location/Qualifiers  
 FT modified\_site 6 /note= "alkylated/arylated"  
 FT /note= "alkylated/arylated"  
 FT J04221397-A.  
 PN 11-AUG-1992.  
 PD 20-DEC-1990; 404484.  
 PR 20-DEC-1990; JP-404484.  
 PA (FUJIF) FUJIFILM PHOTO FILM CO LTD.  
 DR WPI; 92-313681/38.  
 PT Water-soluble vinyl polymer deriv. - for animal cell adhesion  
 PT inhibitor or platelet aggregation inhibitor  
 PS Example; Page 12; 14pp; Japanese.  
 CC The peptide sequence contains the Arg-Gly-Asp motif of cell  
 CC adhering proteins. It comprises the essential unit of a  
 CC water-sol. vinyl polymer with a pref. mol. wt. of 3000-100,000 D.  
 CC The polymer shows various biological activities, e.g. immunological  
 CC coordination, wound healing action and platelet aggregation inhibiting  
 CC action etc. See also R29055-61.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 5; Length 6;

Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

DB 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 40  
 ID W45883 standard; peptide; 6 AA.  
 AC W45883;  
 DT 30-JUN-1998 (first entry)  
 DE Peptide membrane binding element.  
 KW Membrane binding element; thrombotic disease; soluble protein;  
 KW complement-related disease; integral membrane protein; inflammation.  
 OS Homo sapiens.  
 PN W09802454-A2.  
 PD 22-JAN-1998.  
 PF 08-JUL-1997; E03715.  
 PR 15-JUL-1996; GB-014871.  
 PA (ADPR-) ADPROTECH PLC.  
 PI Dodd I, Mossakowska DEI, Smith RAG;  
 DR WPI; 98-110524/10  
 PT Derivatives of soluble poly-peptide(s) bonded to low affinity  
 PT membrane binding groups - useful for treating complement-related and  
 PT thrombotic diseases, providing improved localisation at cellular  
 PT membranes  
 PS Claim 12; Page 70; 75pp; English.  
 CC The present peptide sequence represents a specifically claimed membrane  
 CC binding element. The invention relates to a soluble derivative (A) of a  
 CC soluble polypeptide (I), which comprises at least 2 heterologous  
 CC membrane-binding elements (MBE) of low membrane affinity covalently  
 CC associated with (I). MBE interact, independently and with thermodynamic  
 CC additivity, with components of cellular or artificial membranes exposed  
 CC to extracellular fluids. (A) are used to treat disorders treatable with  
 CC (I) itself, specifically inflammation or any other complement-related  
 CC disorder (e.g. neurological disease, graft rejection, myocardial  
 CC infarction, sepsis, rheumatoid arthritis and many others; including  
 CC application to indwelling devices) and thrombolytic disease, but also to  
 CC treat allergy, induce weight loss, to treat ischaemia or asthma and as  
 CC immuno-modulators for treating multiple sclerosis. (A) are administered  
 CC orally, topically, by injection or inhalation at 0.01-10 (preferably  
 CC 0.1-10) mg/kg/day.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 30; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

DB 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 41  
 ID W07431 standard; peptide; 6 AA.  
 AC W07431;  
 DT 21-JAN-1997 (first entry)  
 DE Synthetic, weak, tumour invasion-inhibitory peptide.  
 KW Tumour invasion; extracellular matrix; ECM; metastasis; RGD sequence;  
 OS Synthetic.  
 PN US5547936-A.  
 PD 20-AUG-1996.  
 PF 22-NOV-1983; 554821.  
 PR 22-NOV-1983; US-554821.  
 PR 17-JUN-1985; US-744981.  
 PR 10-MAR-1988; US-166530.  
 PR 09-SEP-1988; US-242713.  
 PR 25-FEB-1991; US-660526.  
 PR 10-APR-1991; US-683585.  
 PR 08-OCT-1991; US-773106.  
 PR 19-JUN-1992; US-902742.

PR 17-DEC-1993; US-169743.  
 PA (LJOL-) LA JOLLA CANCER RES FOUND.  
 PI Gehlsen KR, Pierschbacher MD, Ruoslahti EI;  
 WPI: 96-392651/39.  
 DR Inhibiting tumour cell invasion through an extracellular matrix -  
 PT using peptide contg. the RGD sequence, partic. for preventing tumour  
 PT metastasis  
 PS Example 1; Column 7-8; 8pp; English.  
 CC W07431-W07433 are peptides identified in an assay for tumour-invasion  
 CC inhibitory activity. The peptides (contg. the RGD sequence) show a  
 CC weak inhibition of tumour invasion of the ECM. Another peptide tested  
 CC (see W07430) showed a significant inhibitory activity. The peptides  
 CC identified can be used to treat cancer and to prevent metastasis, in  
 CC partic. invasion of the extracellular matrix (ECM).  
 CC The peptides are soluble.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 19; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 42  
 ID W03680 standard; peptide; 6 AA.  
 AC W03680;  
 DT 31-DEC-1996 (first entry)  
 DE Fibronectin elution peptide.  
 KW Fibronectin receptor; cell attachment site; therapeutic agent; tissue.  
 OS Synthetic.  
 PN U5540933-A.  
 PD 30-JUL-1996.  
 PF 31-MAY-1985; 740240.  
 PR 31-MAY-1985; US-740240.  
 PR 25-JAN-1989; US-302047.  
 PR 20-MAR-1992; US-857097.  
 PR 29-APR-1993; US-056815.  
 PA (LJOL-) LA JOLLA CANCER RES FOUND.  
 PI Pierschbacher MD, Ruoslahti EI;  
 DR WPI: 96-361919/36.  
 PT Liposome for targeting fibronectin-contg. tissue contains  
 PT glyco:protein - isolated from surface of human cells, also useful  
 PT for detecting tissue contg. fibronectin  
 PS Claim 1; Column 12; 15pp; English.  
 CC The specification deals with a novel fibronectin receptor protein of  
 CC moi. wt 140 kD under reducing SDS-PAGE and 120 kD under non-reducing  
 CC SDS-PAGE, which binds to the cell attachment site in fibronectin and  
 CC can be eluted from this attachment site by the peptide shown here.  
 CC The elution peptide contains a sequence which mimics the attachment  
 CC sequence of fibronectin to the receptor, i.e. Gly-Arg-Gly.  
 CC The novel receptor can be used to deliver therapeutic agents to  
 CC fibronectin-contg. tissues.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 19; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 43  
 ID W34089 standard; peptide; 6 AA.  
 AC W34089;  
 DT 05-MAY-1998 (first entry)  
 DE Beta-1 integrin cell surface receptor inhibitor peptide.  
 KW Beta-1 integrin cell surface receptor; beta-1 integrin-binding domain;  
 KW cancer; tenascin; inflammation; receptor stimulator; fibrin;

KW inhibitor; leucocyte migration.  
 OS Synthetic.  
 PN W09739773-A1.  
 PD 30-OCT-1997.  
 PF 22-APR-1997; U06577.  
 PR 22-APR-1996; US-635572.  
 PA (UYCO ) UNIV COLUMBIA NEW YORK.  
 PI Loike J, Silverstein SC;  
 WPI: 97-535582/49.  
 DR Treating infection caused by in-dwelling devices - also similar  
 PT methods for treating cancers coated with tenascin and treating  
 PT inflammation with receptor stimulators  
 PS Claim 15; Page 63; 91pp; English.  
 CC A novel method has been developed for treating infection caused by  
 CC bacteria on the surface of an in-dwelling foreign body, over and  
 CC around which fibrin has been deposited. The method comprises  
 CC administration of an agent that inhibits signalling mediated by a  
 CC beta 1-integrin cell surface receptor on leucocytes. The agent enhances  
 CC migration of leucocytes in and through the fibrin so that they can  
 CC reach and kill the bacteria. The present sequence represents a  
 CC specifically claimed peptide which contains a beta-1 integrin-binding  
 CC domain. Treatment with the agent overcomes the inhibitory effects of  
 CC fibrin or tenascin on leucocyte migration.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 28; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 44  
 ID W65003 standard; peptide; 6 AA.  
 AC W65003;  
 DT 10-SEP-1998 (first entry)  
 DE Synthetic osteoclast attachment blocking peptide.  
 KW Angiogenesis; inhibitor; alpha-v beta-3 integrin receptor; treatment;  
 KW disease; diagnosis; immunosay; detection; cancer; inflammation;  
 KW rheumatoid arthritis; osteoporosis; restenosis; retinopathy; glaucoma;  
 KW retinal neovascularisation; diabetic retinopathy; macular degeneration.  
 OS Synthetic.  
 PN US5780426-A.  
 PD 14-JUL-1998.  
 PF 07-JUN-1995; 482107.  
 PR 07-JUN-1995; US-482107.  
 PA (IXSY-) IXSYS INC.  
 PI Huse WD, Lee BA, Palladino MA, Varner JA;  
 WPI: 98-413114/35.  
 DR New non-RGD peptides with specific affinity for the alphav, beta3  
 PT integrin receptor - contain specific pentapeptide sequence, used for  
 PT treatment or prevention of particularly angiogenic disorders such as  
 PT cancer, inflammation, osteoporosis etc.  
 PS Disclosure; Column 2; 20pp; English.  
 CC W65001-W65010 are synthetic peptides used in an assay to determine which  
 CC peptides bind to and inhibit the alpha-v beta-3 integrin receptor. Such  
 CC inhibitors could be used to treat or prevent diseases mediated by the  
 CC alpha-v beta-3 integrin receptor, particularly angiogenic diseases, e.g.  
 CC cancer and their metastases, inflammation, rheumatoid arthritis,  
 CC osteoporosis, restenosis, retinal neovascularisation (glaucoma), diabetic  
 CC retinopathy and macular degeneration. The peptides are also useful for  
 CC diagnosis of such diseases by detecting or quantifying the receptor in  
 CC samples and can be used to raise antibodies useful as immunoassay  
 CC reagents.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 33; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6

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QY      1 GRGESP 6
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RESULT  45
ID R29063 standard; peptide; 6 AA.
AC R29063;
DT 17-FEB-1993 (first entry)
DE Peptide contg. RGD motif as a side chain to a water sol. polymer.
KW Adhesive peptide; cell adhesion; inhibitor; platelet aggregation.
OS Synthetic.
FH Key Location/Qualifiers
FT modified_site 1 /note= "alkylated/arylated"
FT modified_site 6 /note= "alkylated/arylated"
PN J04221396-A.
PD 11-AUG-1992.
PF 20-DEC-1990; 404347.
PR 20-DEC-1990; JP-404347.
PA (FUJIF) FUJIFILM PHOTO FILM CO LTD.
DR WPI; 92-313680/38.
PT Water-soluble vinyl polymer deriv. for animal cell adhesion
PT inhibitor or platelet aggregation inhibitor
PS Example: Page 12; 14pp; Japanese.
CC The peptide sequence contains the Arg-Gly-Asp motif of cell
CC adhering proteins. It comprises the essential unit of a
CC water-sol. vinyl polymer with a pref. mol. wt. of 3000-100,000 D.
CC The polymer shows various biological activities, e.g. immunological
CC coordination, wound healing action and platelet aggregation inhibiting
CC action etc. See also R29062-8.
SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 5; Length 6;
Best Local Similarity 83.3%; Pred. No. 9.97e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6
|||||
QY 1 GRGESP 6

RESULT 46
ID R35465 standard; peptide; 6 AA.
AC R35465;
DT 26-AUG-1993 (first entry)
DE Propene-amide deriv. polymer metastasis inhibitor.
KW Low toxicity; higher cell adhesion ability; metastasis inhibition.
OS Synthetic.
FH Key Location/Qualifiers
FT modified_site 1 /note= "CH2-CCH3CO-Gly"
PN J05097699-A.
PD 20-APR-1993.
PF 04-OCT-1991; 258095.
PR 04-OCT-1991; JP-258095.
PA (FUJIF) FUJIFILM PHOTO FILM CO LTD.
DR WPI; 93-164370/20.
PT Low toxicity metastasis inhibitor - composed of propene-amide
PT deriv. polymer or its pharmacologically acceptable salts
PS Claim 1; Page 2; 12pp; Japanese.
CC The sequence is that of a polymer of propene amide deriv. which has
CC a higher cell adhesion ability, compared with that of the core
CC sequence of cell adhesive protein. It has various kinds of
CC biological activities e.g. metastasis inhibition and has low
CC toxicity.
SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 7; Length 6;
Best Local Similarity 83.3%; Pred. No. 9.97e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6

QY      1 GRGESP 6
|||||
RESULT  47
ID R92740 standard; peptide; 6 AA.
AC R92740;
DT 03-SEP-1996 (first entry)
DE RGD-containing sequence, for controlling cell distribution.
KW Control; distribution; bioartificial organ; BAO; cellular attachment;
KW neurotransmitter; hormone; cytokine; growth factor; enzyme.
OS Synthetic.
FH Key Location/Qualifiers
FT peptide 2..4 /note= "Claimed core peptide"
PN W09602646-A2.
PD 01-FEB-1996.
PF 20-JUL-1995; U09281.
PR 20-JUL-1994; US-279773.
PR 09-MAY-1995; US-432698.
PA (CYTO-) CYTOTHERAPEUTICS INC.
PI Aebischer P, Cain BM, Doherty EJ, Gentile FT, Hammang JP;
PI Holland LM, Schinstine M, Shoichet MS, Winn SR;
DR WPI; 96-105908/11.
PT Controlling distribution of cells in bio-artificial organs - e.g. by
PT treatment of cells, or growth surfaces, to inhibit proliferation,
PT promote differentiation or modulate adhesion, for in vivo prodn. of
PT hormones, neuro-transmitter(s) etc
PS Claim 22; Page 70; 84pp; English.
CC The sequences given in R92739-41 are peptides which were used in the
CC method of the invention to control the distribution of cells within
CC a bioartificial organ (BAO). These peptides have been particularly
CC useful in promoting cellular attachment. These peptides are pref.
CC bound to the membrane of the BAO which is a biocompatible,
CC perselective jacket. These peptides act to control the distribution
CC of the core of living cells included in the BAO after in vivo
CC implantation. BAO are used therapeutically to produce e.g.
CC neurotransmitters, hormones, cytokines, growth factors, enzymes, etc.
SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 17; Length 6;
Best Local Similarity 83.3%; Pred. No. 9.97e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6
|||||
QY 1 GRGESP 6

RESULT 48
ID R37834 standard; Protein; 6 AA.
AC R37834;
DT 12-OCT-1993 (first entry)
DE Cell adhesion motif encoded by insert 74RGD6.
KW Fibronectin; cell-cell adhesion; Arg-Gly-Asp motif; human lysozyme;
KW bacteriolysis.
OS Synthetic.
FH Key Location/Qualifiers
FT binding_site 2..5 /label= cell_adhesion_motif
PN J05115284-A.
PD 14-MAY-1993.
PF 29-OCT-1991; 282866.
PR 29-OCT-1991; JP-282866.
PA (FUJII) FUJII GAKUEN GH.
PA (TANP-) TANPAKU KOGAKU KENKYUSHO KK.
DR WPI; 93-190693/24.
DR N-PSDB; Q42608.
PT New mutant human lysozyme, - is incorporated into chimeric
PT protein for use in analysing high order structure of aminoacid
PT sequence conrg. cell adhesive function site
PS Example 1; Page 6; 10pp; Japanese.
CC The double-stranded DNA 74RGD6 is one of 5 preferred sequences, each

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CC coding for a cell-adhesion motif, which can be inserted between  
 CC the codons for Val 74 and Asn 75 of human lysozyme. The resulting  
 CC mutant lysozyme polypeptide has cell adhesion properties in  
 CC addition to its bacteriolytic ability. See Q42607-Q42611.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 7; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 Qy 1 GRGESP 6

RESULT 49

ID R49801 standard; peptide; 6 AA.  
 AC R49801.  
 DT 23-AUG-1994 (first entry)  
 DE Sequence of peptide which binds to fibrinogen receptor GpIbIIIa.  
 KW Random degradation; recombination; scrambling reaction.  
 OS Synthetic.  
 PN WO9404558-A.  
 PD 03-MAR-1994.  
 PF 09-AUG-1993; U08231.  
 PR 21-AUG-1992; US-932200.  
 PA (RECE-) RECEPTOR LAB INC.  
 PI Hopfinger AJ, Venton DL;  
 DR WPI: 94-083103/10.

PT Identifying peptides which binds to a specific target - by  
 PT contacting target with scrambled equilibrium mixt. of many  
 PT peptide derived from protein by incubation with protease, for  
 PT detecting potential therapeutic agents  
 PS Example: Table 6, Page 64; 97pp: English.

CC The inventors claim a method for inexpensively and rapidly producing  
 CC a large and varied population of peptides and screening this varied  
 CC population for the presence of peptides which bind to a target, for  
 CC example, a macromolecule associated with a particular physiological  
 CC function. The specific binding peptides are isolated and sequenced,  
 CC synthesised on a large-scale, their biological activity is  
 CC demonstrated, and then subjected to clinical testing. The random  
 CC population of peptides is generated by employing a scrambling system  
 CC which utilises one or more proteases, esp. papain, pepsin, bromelain,  
 CC thermolysin, trypsin, pronase, chymotrypsin, subtilisin and dipeptidyl  
 CC peptidase IV. A typical starting protein is casein. Targets are  
 CC esp. receptors involved in physiological processes, partic.  
 CC fibrinogen; sickle cell haemoglobin; collagenase IV; rennin; Gp  
 CC Iib IIIa or phospholipase A2. Fibrinogen receptor GpIbIIIa binds  
 CC to many RGD contg. peptides such as RGDW, RGDY and RQDM. In the  
 CC example, a GpIbIIIa binding system is coupled to a system for  
 CC scrambling a mixture of RD, WY and GSF peptides with thermolysin  
 CC and bromelain. Isolation of RGD peptides bound to the receptor  
 CC would constitute proof of the activity of the scrambling system.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 9; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 Qy 1 GRGESP 6

RESULT 50

ID R25425 standard; peptide; 6 AA.  
 AC R25425;  
 DT 06-JAN-1993 (first entry)  
 DE Peptide deriv. contg. RGD motif.  
 KW Phosphodiester; liposomes; micelles; fibronectin; cell adhesion;  
 OS Synthetic.  
 PN J04164095-A.

PD 09-JUN-1992.  
 PF 26-OCT-1990; 289490.  
 PR 26-OCT-1990; JP-289490.  
 PA (FUJF ) FUJI PHOTO FILM CO LTD.  
 DR WPI: 92-239950/29.

PT New peptide contg. arginine-glycine-aspartic acid sequence -  
 PT useful in prepn. of liposome or micelles used to suppress tumour  
 PT metastasis, since sequence is activation site of fibronectin  
 PS Rample 1; Page 4; 9pp: Japanese.

CC The peptide is part of a phosphodiester bond which also comprises a  
 CC hydrophobic organic gp. e.g. an isoprenoid or glycerolipid. The  
 CC new derivs. of the peptide contg. the Arg-Gly-Asp sequence are  
 CC useful for the prepn. of liposomes or micelles contg. the RGD  
 CC sequence. The RGD sequence is an activation site of fibronectin  
 CC which is a cell adhesion mol. The liposomes are useful for the  
 CC suppression of tumour metastasis, agglutination of platelets, and  
 CC activation of lymphocytes. They are useful for targetting anti-  
 CC tumour drugs onto tumours.  
 CC See also R25426.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 5; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 Qy 1 GRGESP 6

RESULT 51

ID W35452 standard; peptide; 6 AA.  
 AC W35452;  
 DT 22-APR-1998 (first entry)  
 DE Non-dendritic peptide carrier binding activity fragment.  
 KW T-cell stimulatory peptide; immunogen; non-dendritic; carrier; tumour;  
 KW scaffold; inhibition; metastasis; wound healing; solid phase.  
 OS Unidentified.  
 PN WO9738011-A1.  
 PD 16-OCT-1997.

PF 03-APR-1997; D00146.  
 PR 03-APR-1996; DK-000398.  
 PA (PEPR-) PEPRESEARCH AS.  
 PI Heegaard PMH, Jakobsen PH;  
 DR WPI: 97-512645/47.

PT Non-dendritic peptide carrier linked to a solid phase - useful as a  
 PT diagnostic agent and as a scaffold for production of chemical  
 PT derivatives  
 PS Claim 51; Page 203; 262pp; English.

CC A non-dendritic peptide carrier (A) has been developed which is coupled  
 CC through a linker to a solid phase, forming a complex of (A)-solid phase.  
 CC Where (A) comprises 10-50 amino acids capable of forming a secondary  
 CC structure in a benign buffer after liberation from the solid phase, and  
 CC further the (A)-solid phase complex comprises an immunogenic substance  
 CC and/or an immune mediator coupled on (A). The present sequence  
 CC represents a specifically claimed non-dendritic peptide carrier binding  
 CC activity fragment from the invention. An (A)-solid phase complex can  
 CC be used as a scaffold for the production of chemical derivatives,  
 CC characterised by covalently attaching molecules at attachment points.  
 CC Alternatively (A) is used as a scaffold-peptide for the incorporation  
 CC into an Immunostimulating Complex (iscm) resulting an (A)-iscm complex  
 CC which is used for the chemical coupling of antigenic substances in an  
 CC aqueous solution by conjugation. (A) derivatised with one or more  
 CC peptides having fibronectin-, laminin- or vitronectin-like binding  
 CC activities can be used for the promotion of cell-attachment to plastic  
 CC surfaces, in particular to inhibit tumour growth and metastasis, and for  
 CC promotion of wound healing. Also a derivatised (A) can be used for the  
 CC selection of specifically-binding aptamers or as a diagnostic agent.  
 CC Such diagnostic-(A) molecules could be used to detect molecules derived  
 CC from or indicative of pregnancy or of a disease, such as an infectious,  
 CC autoimmune or cancerous disease.  
 SQ Sequence 6 AA;



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Query Match          97.6%; Score 40; DB 27; Length 6;
Best Local Similarity 83.3%; Pred. No. 9.97e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6
   |||:|
QY 1 GRGESP 6

RESULT 52
ID R80966 standard; peptide; 6 AA.
AC R80966;
DT 24-APR-1996 (first entry)
DE RGD contg. peptide used in integrin binding studies.
KW Integrin; chimeric; extracellular; transmembrane; cytoplasmic;
KW ligand; activation inhibitor; inflammation; autoimmune disease;
KW transplantation; thrombus; cancer.
OS Homo sapiens.
PN W09525173-A1.
PD 21-SEP-1995.
PF 06-MAR-1995; U02885.
PR 14-MAR-1994; US-214770.
PA (SCRI ) SCRIPPS RES INST.
PI Ginsberg MH, O'Toole TE;
DR WPI: 95-336977/43.
PT Chimeric integrin mol. comprising reporter and target integrin
PT domains - for identifying integrin activation inhibitors which are
PT useful for treating or preventing unwanted immune responses
PS Disclosure; Page 12; 50pp; English.
CC Chimeric integrin molecules comprising the extracellular and
CC transmembrane domains of a reporter integrin (RI) fused to the cyto-
CC plasmic domain of a target integrin (TI). The RI is pref. from
CC alphaIIB-beta3 and the TI is pref. chosen from alphaV-beta3, alphaM-
CC beta2, alphaI-beta2, alpha2-beta1, alpha5-beta1, alpha6a-beta1,
CC alphaIIB-beta3 or alpha4-beta1. This sequence is used in cell
CC binding assays to determine the cell-type specificity of the
CC chimeric integrins. The chimeric integrins are useful for
CC identifying TI inhibitors which can be used to treat mammalian
CC cancers, thrombosis or any unwanted immune response, e.g.
CC inflammation; autoimmune disease; allergies or organ/tissue
CC transplant rejection.
SQ Sequence 6 AA;

Query Match          97.6%; Score 40; DB 15; Length 6;
Best Local Similarity 83.3%; Pred. No. 9.97e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6
   |||:|
QY 1 GRGESP 6

RESULT 53
ID R36708 standard; peptide; 6 AA.
AC R36708;
DT 26-AUG-1993 (first entry)
DE Adhesion formation prevention RGD-contg. peptide.
KW Tissue repair; peritoneum; surgery; post-surgically; inhibition;
KW platelet aggregation; cardiovascular; orthopedic; thoracic;
KW ophthalmic; CNS; use.
OS Synthetic.
PN W09308818-A.
PD 13-MAY-1993.
PF 06-NOV-1992; U09494.
PR 07-NOV-1991; US-789231.
PA (UYSC-) UNIV SOUTHERN CALIFORNIA.
PI Dizerega GS, Rodgers KE;
DR WPI: 93-167381/20.
PT Prevention of adhesion formation, partic. post-surgically - comprises
PT administering a RGD-contg. peptide for a time sufficient to permit
PT tissue repair
PS Example; Page 18; 22pp; English.
CC The sequence is that of an RGD-contg. peptide which is used in a

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CC method for prevention of adhesion formation for a time sufficient
CC to permit tissue repair. The method is used for minimising or
CC preventing adhesion formation, partic. in the peritoneum following
CC surgery, but also for e.g. cardiovascular, orthopedic, thoracic,
CC ophthalmic, CNS and other uses. In addn., the peptide inhibits
CC platelet aggregation and does not induce inflammation or trauma
CC at the site of administration.
SQ Sequence 6 AA;

Query Match          97.6%; Score 40; DB 7; Length 6;
Best Local Similarity 83.3%; Pred. No. 9.97e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6
   |||:|
QY 1 GRGESP 6

RESULT 54
ID R70654 standard; peptide; 6 AA.
AC R70654;
DT 26-JUN-1995 (first entry)
DE Synthetic RGD peptide inhibits intercellular adhesion by fibronectin.
KW RGD peptide; competitor; fibronectin; inhibition; RGD-lipid derivative;
KW intercellular adhesion; suppress transfer of cancer cell; liposome.
OS Synthetic.
FH Key Location/Qualifiers
FT modified_site 1 /note= "Cholesterol-CO-Gly or H-Gly"
FT modified_site 6 /note= "Pro-OH"
FT J06219967-A.
PN 02-AUG-1994.
PD 22-JAN-1993; 009290.
PR 22-JAN-1993; JP-009290.
PA (DDSK-) DDS KENKYUSHO KK.
DR WPI: 94-312651/39.
PT New peptide-lipid derivs. bound directly or via linker to lipid -
PT useful for inhibiting mouse lung cancer cell line, 3LL cell
PT adhesion by fibronectin
PS Example; Page 9; 12pp; Japanese.
CC R70651-56 are RGD contg. peptides that can bind to cancer cells. The
CC exogenous peptides compete with fibronectin and inhibit
CC intercellular adhesion by fibronectin. The peptides are bound
CC directly or via a linker to a lipid. A liposome suspension contg.
CC RGD peptide was found to effectively suppress 3LL cell adhesion by
CC fibronectin, in the mouse lung cancer cell line.
SQ Sequence 6 AA;

Query Match          97.6%; Score 40; DB 12; Length 6;
Best Local Similarity 83.3%; Pred. No. 9.97e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6
   |||:|
QY 1 GRGESP 6

RESULT 55
ID R36710 standard; peptide; 6 AA.
AC R36710;
DT 26-AUG-1993 (first entry)
DE Adhesion formation prevention RGD-contg. peptide.
KW Tissue repair; peritoneum; surgery; post-surgically; inhibition;
KW platelet aggregation; cardiovascular; orthopedic; thoracic;
KW ophthalmic; CNS; use.
OS Synthetic.
FH Key Location/Qualifiers
FT modified_site 5 /label= D-Ser
FT W09308818-A.
PN 13-MAY-1993.
PF 06-NOV-1992; U09494.

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PR 07-NOV-1991; US-789231.  
 PA (UYSC-) UNIV SOUTHERN CALIFORNIA.  
 PI Dizerega GS, Rodgers KE;  
 DR WPI; 93-167381/20.  
 PT Prevention of adhesion formation, partic. post-surgically - comprises  
 PT administering a RGD-contg. peptide for a time sufficient to permit  
 PT tissue repair  
 PS Example; Page 18; 22pp; English.  
 CC The sequence is that of an RGD-contg. peptide which is used in a  
 CC method for prevention of adhesion formation for a time sufficient  
 CC to permit tissue repair. The method is used for minimising or  
 CC preventing adhesion formation, partic. in the peritoneum following  
 CC surgery, but also for e.g. cardiovascular, orthopaedic, thoracic,  
 CC ophthalmic, CNS and other uses. In addn., the peptide inhibits  
 CC platelet aggregation and does not induce inflammation or trauma  
 CC at the site of administration.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 7; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 56  
 ID R57890 standard; peptide; 6 AA.  
 AC R57890;  
 DT 29-MAR-1995 (first entry)  
 DE Binding site derived from Fab antibody HCDR3.  
 KW Heavy; light; CDR; complementarity determining region; immunoglobulin;  
 KW binding site; CDR; complementarity determining region; immunoglobulin;  
 KW heavy; light; primer extension; PCR; amplify; fibronectin; vitronectin;  
 KW RGD-dependent; integrin ligand; von Willebrand factor; EBV; gp350/220;  
 KW envelope glycoprotein; HIV; gp120; reovirus; hemagglutinin; insulin;  
 KW cellular receptor; CR2; CD4; CD4; Hormone; thyroid stimulating hormone; TSH;  
 KW transferrin; apolipoprotein; apo E; apo AI; MHC; class I; class II;  
 KW non-RGD-dependent; vitronectin receptor; alpha-v, beta-3; modulation;  
 KW anti-gp1b/IIIa; monoclonal antibody; MAb; platelet adhesion; cancer;  
 KW coagulation; inflammation; anti-vitronectin; tumour cell adhesion;  
 KW migration.  
 OS Synthetic.  
 PN WO9418221-A.  
 PD 18-AUG-1994.  
 PF 02-FEB-1994; U01258.  
 PR 02-FEB-1993; US-012566.  
 PR 28-JUN-1993; US-084542.  
 PA (SCRI ) SCRIPPS RES INST.  
 PI Barbas CF, Lerner RA;  
 DR WPI; 94-279675/34.  
 PT Production of binding sites within CDR regions of immunoglobulins  
 PT - displayed on the surface of filamentous phage particles, for  
 PT inhibiting platelet aggregation and vitronectin binding  
 PS Example 5; Page 142; 207pp; English.  
 CC This sequence represents a conserved binding site which may be used  
 CC in the method of the invention for producing a polypeptide having a  
 CC binding site capable of binding a preselected agent. Nucleotide  
 CC sequences encoding these binding site peptides were introduced into  
 CC a CDR region of a nucleic acid encoding an immunoglobulin heavy (H)  
 CC or light (L) chain, by amplifying the CDR region by primer extension.  
 CC Preferred binding sites are derived from the RGD-dependent integrin  
 CC ligands, eg. fibronectin, vitronectin, von Willebrand factor, from  
 CC the envelope glycoprotein from viruses such as HIV gp120, EBV gp350/  
 CC 220, reovirus hemagglutinin, from cellular receptors such as CR2 or  
 CC CD4, from protein hormones such as thyroid stimulating hormone (TSH),  
 CC insulin, transferrin, from apolipoproteins such as apo E and apo AI,  
 CC from immunoglobulin CDRs and from MHC class I or II proteins. Non-RGD-  
 CC dependent integrin binding sites were selected for the affinity to bind  
 CC vitronectin receptor alpha-v, beta-3. An anti-gp1b/IIIa monoclonal  
 CC antibody (MAb) produced in this way can be used to modulate platelet  
 CC adhesion in the treatment of coagulation and some inflammatory responses.  
 CC An anti-vitronectin MAb can be used in the treatment of cancer by

CC blocking tumour cell adhesion and migration. This sequence represents  
 CC an RGD-dependent binding site which has been shown to bind the human  
 CC vitronectin receptor (VnR) alpha-v, beta-3 when present in a phagenid  
 CC display protein.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 11; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 57  
 ID R26814 standard; peptide; 6 AA.  
 AC R26814;  
 DT 18-FEB-1993 (first entry)  
 DE Polyethylene glycol derivative #5.  
 KW triazine ring; methoxy-polyethyleneoxy group; fibronectin; vitronectin;  
 KW platelet adhesion; metastasis; neuropathy.  
 OS Synthetic.  
 PN J04217693-A.  
 PD 07-AUG-1992.  
 PF 30-NOV-1990; 333717.  
 PR 23-OCT-1990; JP-285172.  
 PA (FUJF ) FUJII PHOTO FILM CO LTD.  
 DR WPI; 92-312284/38.  
 PT Polyethylene glycol derivs. contg. peptide(s) - inhibit cellular  
 PT adhesion for fibronectin or vitronectin and are used to inhibit  
 PT agglutination or adhesion of platelets  
 PS Disclosure; Page 4; 9pp; Japanese.  
 CC The sequences given in R26810-14 are examples of a peptide chain  
 CC which is attached once or twice to a triazine ring which is also  
 CC substituted twice or once, respectively, with a methoxy-polyethyleneoxy  
 CC group. These peptides can be used to inhibit cellular adhesion to  
 CC fibronectin or vitronectin and they are useful as inhibitors for  
 CC agglutination or adhesion of platelets. They can also be useful as  
 CC inhibitors for metastasis of cancers, inhibitors of agglutination of  
 CC platelets caused by tumour cells in the blood capillaries, and drugs  
 CC acting on neuropathy.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 5; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 58  
 ID R70478 standard; peptide; 6 AA.  
 AC R70478;  
 DT 20-DEC-1995 (first entry)  
 DE Cancer metastasis inhibitory RGD peptide derivative #6.  
 KW Cancer metastasis; adhesive peptide; core sequence; dextran; cancer;  
 KW water soluble polysaccharide; metastasis; wound; immunogenicity.  
 OS Synthetic.  
 PN J07089999-A.  
 PD 04-APR-1995.  
 PF 17-SEP-1993; 254779.  
 PR 17-SEP-1993; JP-254779.  
 PA (JAPG ) NIPPON ZEON KK.  
 DR WPI; 95-167254/22.  
 PT Cancer metastasis inhibitive peptide derivs. - useful for inhibition  
 PT of cancer metastasis, healing of wounds and regulation of  
 PT immunogenicity.  
 PS Disclosure; Page 2; 6pp; Japanese.  
 CC The peptides R70472-90 and R82907-24 are peptide derivatives which  
 CC inhibit cancer metastasis. They are composed of an adhesive peptide with

CC a core sequence selected from: RGD (R70472-85), YIGSR (R70486-90) or  
 CC other sequence (R82907-24), linked to a water soluble polysaccharide,  
 CC preferably a water soluble dextran, at the C-terminus. The peptides are  
 CC useful in inhibiting cancer metastasis, healing wounds and the regulation  
 CC of immunogenicity.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 14; Length 6;  
 Best Local Similarity 83.3%; Pred. NO. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
 Db 1 grgdsdp 6  
 |||:|  
 Qy 1 GRGESP 6

## RESULT 59

ID R88570 standard; peptide; 6 AA.  
 AC R88570;  
 DT 04-SEP-1996 (first entry)  
 DE RGD-containing sequence, for controlling cell proliferation.  
 KW Laminin-derived peptide; bioartificial; regeneration; nerve;  
 KW 3-D hydrogel extracellular matrix; proliferation; neurite;  
 KW replacement; cartilage; tendon; muscle; bone; skin.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT Peptide 2..4  
 FT /note= "Claimed core peptide, claim 2"  
 FN WO9602286-A1.  
 PD 01-FEB-1996.  
 PF 20-JUL-1995; U09282.  
 PR 20-JUL-1994; US-280646.  
 PA (CYTO-) CYTOTHERAPEUTICS INC.  
 PI Aebischer P, Bellamkonda RV, Ranieri JP;  
 DR WPI; 96-105660/11.  
 PT Bio-artificial 3-D hydrogel extracellular matrix comprising hydrogel  
 PT derivatised with adhesion molecules - useful for promoting in vivo  
 PT regeneration of severed nerves, tissue replacement and cell  
 PT manipulation  
 PS Claim 42; Page 497; 65pp; English.  
 CC The sequences given in R88569-71 are laminin-derived peptides which  
 CC were used in the bioartificial 3-D hydrogel extracellular matrix  
 CC of the invention to control the distribution of cells. These peptides  
 CC are particularly useful in promoting cellular proliferation in neurites.  
 CC These peptides are used to derivatise the hydrogel. The hydrogel is a  
 CC polysaccharide and has a pore radius of > 120 nm, pref. 150 nm. The  
 CC hydrogel is useful for promoting in vivo regeneration of a severed  
 CC nerve. It may have cells suspended in it and may be used to promote  
 CC in vivo replacement of cartilage, tendon, muscle, bone or skin.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 17; Length 6;  
 Best Local Similarity 83.3%; Pred. NO. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
 Db 1 grgdsdp 6  
 |||:|  
 Qy 1 GRGESP 6

## RESULT 60

ID R04612 standard; protein; 6 AA.  
 AC R04612;  
 DT 05-SEP-1990 (first entry)  
 DE Antiviral agent.  
 KW Antiviral; M2; poliovirus; polio; hepatitis.  
 OS Synthetic.  
 FN J02078631-A.  
 PD 19-MAR-1990.  
 PF 14-SEP-1988; 228843.  
 PR 14-SEP-1988; JP-228843.  
 PA (NIHA) Nippon Mining KK.  
 DR WPI; 90-129080/17.

PT Antiviral agent contg. tri:peptide (unit) -  
 PT of basic aminoacid, then alanine, glycine or sarcosine, and  
 PT acidic aminoacid, effective against virus with protein-terminated DNA  
 PT or RNA.  
 PS Disclosure; 4pp; Japanese.  
 CC Peptide is effective against inhibiting propagation of DNA or RNA  
 CC bonded, protein containing viruses eg. Poliovirus, Hepatitis virus.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 1; Length 6;  
 Best Local Similarity 83.3%; Pred. NO. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
 Db 1 grgdsdp 6  
 |||:|  
 Qy 1 GRGESP 6

## RESULT 61

ID W25186 standard; peptide; 6 AA.  
 AC W25186;  
 DT 05-JAN-1998 (first entry)  
 DE RGD-peptide capable of binding cell adhesion molecules.  
 KW RGD; arginine; glycine; aspartic acid; cell adhesion molecule;  
 KW binding; bladder irrigation; tumour removal; endoscopic operation;  
 KW transurethral resection; cancer; neoplasia.  
 OS Synthetic.  
 FN DE19529909-A1.  
 PD 20-FEB-1997.  
 PF 15-AUG-1995; 029909.  
 PR 15-AUG-1995; DE-029909.  
 PA (FREP) FRESSENIUS AG.  
 PI Boehle A;  
 DR WPI; 97-133793/13.  
 PT Endoscopic irrigation solns. - contg. peptide(s) that bind to cell  
 PT adhesion molecules  
 PS Claim 5; Page 8; 8pp; German.  
 CC W25173-W25186 are peptides containing an RGD sequence or equivalent.  
 CC The peptides are capable of binding to cell adhesion molecules and  
 CC are used in aqueous irrigation solutions for use during and after  
 CC endoscopic operations. Preferred irrigation solutions are  
 CC electrolyte-free and contain 1 microg/ml to 100 mg/ml of one or more  
 CC oligopeptides containing the amino acid sequences: RGD, LDV, IDA, DGEA,  
 CC GRRP, VTL, YIGSR, KQAGDV and/or REDV (given in one letter amino acid  
 CC code). The solutions are especially used for irrigating the bladder  
 CC during and after tumour removal by transurethral resection. The  
 CC peptides protect against recurrence of tumours.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 24; Length 6;  
 Best Local Similarity 83.3%; Pred. NO. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
 Db 1 grgdsdp 6  
 |||:|  
 Qy 1 GRGESP 6

## RESULT 62

ID R06455 standard; peptide; 6 AA.  
 AC R06455;  
 DT 04-JAN-1991 (first entry)  
 DE Fibronectin derived RGD-contg. peptide.  
 KW Tenascin; receptor; tumour.  
 OS Synthetic.  
 FN W09008781-A.  
 PD 09-AUG-1990.  
 PF 23-JAN-1990; U00408.  
 PR 24-JAN-1989; US-302755.  
 PA (JOLL-) LA JOLLA CANCER RES.  
 PI Ruoslahti EI, Bourdon MA;  
 DR WPI; 90-260895/34.  
 PT Tenascin-induced cell attachment - interacts with tenascin in

PT arginine-glycine-asparagine dependent manner.  
 PS Example 11; Page 9; 42pp; English.  
 CC The peptide was used in cell attachment assays to show inhibition  
 CC of attachment to tenascin by Arg-Gly Asp contg. peptides. It  
 CC completely inhibited attachment at a concn. of 300ug/ml, 30- and  
 CC 50-fold lower than needed for comparable inhibition of cell  
 CC attachment to vitronectin and fibronectin resp.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 2; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 63  
 ID R71456 standard; peptide; 6 AA.  
 AC R71456;  
 DT 20-OCT-1995 (first entry)  
 DE Competitor fibronectin peptide - inhibits cytoskeleton stiffening.  
 KW fibronectin; cytoskeleton; transmembrane force transfer; diagnostic;  
 KW characterise cell; mechanical stimulation; ferromagnetic bead.  
 OS Synthetic.  
 PN WO9506248-A.  
 PD 02-MAR-1995.  
 PF 25-AUG-1994; U09685.  
 PR 25-AUG-1993; US-112757.  
 PA (CHILDREN'S) CHILDRENS MEDICAL CENT.  
 PA (HARD ) HARVARD COLLEGE.  
 PI Butler JP, Fredberg JJ, Ingber DE, Wang N;  
 DR WPI; 95-106940/14.  
 PT System for applying mechanical loads to specific cell surface  
 PT molecules - using ferromagnetic beads coated with attachment  
 PT molecules, and alignment and twisting magnetic fields, e.g. for  
 PT screening therapeutic agents, toxins etc.  
 PS Example 1; Page 19; 42pp; English.  
 CC The system of the invention is used to determine the effect of  
 CC mechanical stimulation of mols. present on a cell surface.  
 CC Ferromagnetic microbeads are coated with attachment mols. eg. matrix  
 CC mols., etc. that physically interconnect with distinct cytoskeletal  
 CC proteins. A strong external magnetic field is applied to the beads, to  
 CC impose a defined mechanical stress. Transmembrane force transfer is  
 CC measured and the cells observed for changes in stiffening and twisting.  
 CC To demonstrate the specificity of transmembrane force transfer in  
 CC living endothelial cells, this soluble synthetic peptide was  
 CC included in the culture medium as a competitor. This fibronectin  
 CC peptide inhibited cytoskeletal stiffening whereas a control  
 CC hexapeptide with a single amino acid substitution (R71457) had no  
 CC inhibitory effects.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 13; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 64  
 ID R22969 standard; Protein; 6 AA.  
 AC R22969;  
 DT 26-OCT-1992 (first entry)  
 DE Cell adhesive peptide #3 on new CM chitin derivative side chains.  
 KW CM-chitin; cell adhesion; coadhesion; wound healing; RGD peptide;  
 KW immunoregulating agents; platelet coagulation; platelet adhesion.  
 OS Synthetic.  
 PN EP-482649-A.  
 PD 29-APR-1992.

PF 24-OCT-1991; 118179.  
 PR 26-OCT-1990; JP-289491.  
 PR 30-NOV-1990; JP-333718.  
 PA (FUJIF ) FUJI PHOTO FILM CO.  
 PI Kojima M, Komazawa H;  
 DR WPI; 92-142753/18.  
 PT New CM chitin derivs. contg. adhesive peptides - have  
 PT immuno-regulation and inhibiting blood-platelet coagulation  
 PS Example; Page 5; 24pp; English.  
 CC This peptide is an example of a claimed generic sequence, and is  
 CC present on the sidechain of new CM-chitin derivatives. The peptide  
 CC may be prepared by liquid or solid phase peptide synthesis and then  
 CC coupled to CM-chitin or carboxylated CM-chitin by amide bond forming  
 CC methods using eg CNBr. acid azides, or water soluble carbodiimides.  
 CC The sequence contains the core sequence RGD of a cell adhesive  
 CC protein and the CM-chitin derivatives contg. it will adhere to cells  
 CC through the core sequence according to a mechanism similar to that  
 CC for the cell adhesive protein. The derivatives act as antagonists  
 CC of the cell adhesive protein and can be used as animal cell  
 CC adhesion-inhibiting agents, wound healing agents, immunoregulating  
 CC agents or platelet coagulation/adhesion-inhibiting agents.  
 CC See also R22967-70.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 4; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 65  
 ID W03484 standard; peptide; 6 AA.  
 AC W03484;  
 DT 24-OCT-1996 (first entry)  
 DE Alpha(5)-Beta(1) integrin binding peptide 2.  
 KW Synthetic; fibronectin; vitronectin; integrin; binding motif; adhesion;  
 KW extracellular matrix protein; tumour metastasis.  
 OS Synthetic.  
 PN US536814-A.  
 PD 16-JUL-1996.  
 PF 27-SEP-1993; US-127422.  
 PR 11-MAR-1994; US-212186.  
 PA (LJOL-) LA JOLLA CANCER RES FOUND.  
 PI Koivunen E, Ruoslahti E;  
 DR WPI; 96-341556/34.  
 PT Synthetic integrin-binding peptide(s) - useful for inhibiting tumour  
 PT metastasis, etc.  
 PS Example 4; Column 10; 16pp; English.  
 CC Peptides W03483-508 are examples of synthetic peptides generated to bind  
 CC to the fibronectin/vitronectin-binding integrin alpha(5)beta(1). They  
 CC are synthesised to contain the alpha(5)beta(1)-integrin peptide binding  
 CC motifs: DGR, NGR or RGD. The peptides interfere with the binding of  
 CC fibronectin and vitronectin to this integrin and thus may be used to  
 CC block integrin-mediated cell adhesion to extracellular matrix proteins,  
 CC esp. to inhibit tumour metastasis.  
 SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 18; Length 6;  
 Best Local Similarity 83.3%; Pred. No. 9.97e+01;  
 Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6  
 |||:|  
 QY 1 GRGESP 6

RESULT 66

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ID R99889 standard; peptide; 6 AA.
AC R99889;
DE 05-NOV-1996 (first entry)
DE RGD-contg. synthetic peptidic ligand.
KW fibrinogen; blood clotting; GPIIb-IIIa receptor; binding; complex;
KW epitope; exposed; monoclonal antibody.
OS Synthetic.
PN US5470738-A.
PD 28-NOV-1995.
PF 08-JUL-1987; 070953.
PR 08-JUL-1987; US-070953.
PR 31-MAR-1988; US-175342.
PR 05-OCT-1989; US-417565.
PR 04-OCT-1993; US-131320.
PA (SCRI ) SCRIPPS RES INST.
PI Frelinger AL, Ginsberg MH, Plow EF;
DR WPI; 96-019874/02.
PT Monoclonal antibodies specific for ligand-bound GPIIb-IIIa receptor
PT - useful for detection of clotting disorders and thrombi
PS Example 1; Column 20; 20pp; English.
CC Monoclonal antibodies specific for a ligand-induced binding site on
CC GPIIb, esp. one induced in a platelet-associated GPIIb-IIIa/fibrinogen
CC complex are claimed. The MAb binds an epitope exposed upon binding of
CC the ligand and receptor. The epitope is not present on non-bound ligand
CC or receptor. The MABs are useful to prevent blood clotting and in
CC diagnostics. The present sequence is a synthetic RGD-contg. peptide
CC ligand.
SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 18; Length 6;
Best Local Similarity 83.3%; Pred. No. 9.97e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6
   |||:|
QY 1 GRGESP 6

RESULT 67
ID R29068 standard; peptide; 6 AA.
AC R29068;
DE 17-FEB-1993 (first entry)
DE Peptide contg. RGD motif as a side chain to a water sol. polymer.
KW Adhesive peptide; cell adhesion; inhibitor; platelet aggregation.
OS Synthetic.
FH Key Location/Qualifiers
FT modified_site 1 /note= "alkylated/arylated"
FT modified_site 6 /note= "alkylated/arylated"
FT J04221396-A.
PN 11-AUG-1992.
PD 20-DEC-1990; 404347.
PR 20-DEC-1990; JP-404347.
PA (FUJIF ) FUJIFILM PHOTO FILM CO LTD.
DR WPI; 92-313680/38.
PT Water-soluble vinyl polymer deriv. for animal cell adhesion
PT inhibitor or platelet aggregation inhibitor
PS Example; Page 13; 14pp; Japanese.
CC The peptide sequence contains the Arg-Gly-Asp motif of cell
CC adhering proteins. It comprises the essential unit of a
CC water-sol. vinyl polymer with a pref. mol. wt. of 3000-100,000 D.
CC The polymer shows various biological activities, e.g. immunological
CC coordination, wound healing action and platelet aggregation inhibiting
CC action etc. See also R29062-7.
SQ Sequence 6 AA;

Query Match 97.6%; Score 40; DB 5; Length 6;
Best Local Similarity 83.3%; Pred. No. 9.97e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdsp 6
   |||:|
QY 1 GRGESP 6

ID R94571 standard; Peptide; 6 AA.
AC R94571;
DE 21-JUN-1996 (first entry)
DE RGD peptide.
KW Cytotactin; neuron; neurite; cell attachment; cell elongation;
KW antibody.
OS Synthetic.
PN WO9608513-A1.
PD 21-MAR-1996.
PR 14-SEP-1995; U11684.
PR 16-SEP-1994; US-308359.
PA (SCRI ) SCRIPPS RES INST.
PI Crossin KL, Phillips G, Prieto AL;
DR WPI; 96-179904/18.
PT Cytotactin polypeptide(s), derivs. and antibodies - capable of
PT stimulating neuronal cell attachment, neurite out-growth and cell
PT elongation
PS Example 5; Page 81; 159pp; English.
CC RGD peptides (R94570 and R94571), inhibitors of cell attachment to
CC type I collagen, inhibited attachment of chicken fibroblasts to
CC cytotactin (see also R94547-48) by 73% and 70% respectively.
CC inhibition was total when the peptides were used together with JG22,
CC a function-blocking monoclonal antibody against the beta-1 integrin.
CC This suggests that there are 2 integrin binding sites on cytotactin.
SQ Sequence 6 AA;

Query Match 92.7%; Score 38; DB 16; Length 6;
Best Local Similarity 66.7%; Pred. No. 1.84e+02;
Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdtp 6
   |||:|
QY 1 GRGESP 6

RESULT 69
ID W84459 standard; Peptide; 6 AA.
AC W84459;
DE 25-MAR-1999 (first entry)
DE RGD peptide that stimulates cell invasion by S. pyogenes 90-226.
KW Streptococcus pyogenes 90-226; pathogen; inhibition;
KW cell adhesion; cell invasion; treatment; bacterial infection;
KW fungal infection.
OS Synthetic.
PN WO9856408-A2.
PD 17-DEC-1998.
PR 10-JUN-1998; U12019.
PR 10-JUN-1997; US-049124.
PA (MINU ) UNIV MINNESOTA.
PI Cleary PP, Cue DR;
DR WPI; 99-080856/07.
PT Method for treating mammal infected by pathogenic microorganism -
PT comprises administering to mammal composition comprising inhibitory
PT compound which inhibits adherence to or invasion of a cell by
PT microorganism
PS Example 2; Page 43; 88pp; English.
CC The present sequence represents a RGD peptide that is able to
CC stimulate cell invasion by Streptococcus pyogenes 90-226. The
CC peptides were used in the course of the invention. The
CC specification describes the treatment of a mammal infected
CC by a pathogenic microorganism which comprises administering an
CC inhibitory compound to inhibit adherence to or invasion of cells
CC by the pathogen. The method is used in the treatment of bacterial
CC or fungal infection.
SQ Sequence 6 AA;

Query Match 92.7%; Score 38; DB 39; Length 6;
Best Local Similarity 66.7%; Pred. No. 1.84e+02;
Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

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Db 1 grgdtp 6  
| | | : |  
QY 1 GRGESP 6

## RESULT 70

ID R36709 standard; peptide; 6 AA.  
AC R36709;  
DT 26-AUG-1993 (first entry)  
DE Adhesion formation prevention RGD-contg. peptide.  
KW Tissue repair; peritoneum; surgery; post-surgically; inhibition;  
KW Platelet aggregation; cardiovascular; orthopedic; thoracic;  
KW Ophthalmic; CNS; use.  
OS Synthetic.  
PN WO9308818-A.  
PD 13-MAY-1993.  
PF 06-NOV-1992; U09494.  
PR 07-NOV-1991; US-789231.  
PA (UYSC-) UNIV SOUTHERN CALIFORNIA.  
PI Dizerega GS, Rodgers KE;  
DR WPI; 93-167381/20.  
PT Prevention of adhesion formation, partic. post-surgically - comprises  
PT administering a RGD-contg. peptide for a time sufficient to permit  
PT tissue repair  
PS Example; Page 18; 22pp; English.  
CC The sequence is that of an RGD-contg. peptide which is used in a  
CC method for prevention of adhesion formation for a time sufficient  
CC to permit tissue repair. The method is used for minimising or  
CC preventing adhesion formation, partic. in the peritoneum following  
CC surgery, but also for e.g. cardiovascular, orthopedic, thoracic,  
CC ophthalmic, CNS and other uses. In addn., the peptide inhibits  
CC platelet aggregation and does not induce inflammation or trauma  
CC at the site of administration.  
SQ Sequence 6 AA;

Query Match 92.7%; Score 38; DB 7; Length 6;  
Best Local Similarity 66.7%; Pred. No. 1.84e+02;  
Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdtp 6  
| | | : |  
QY 1 GRGESP 6

## RESULT 71

ID R04871 standard; peptide; 6 AA.  
AC R04871;  
DT 25-SEP-1989 (first entry)  
DE Peptide from fibronectin  
KW Fibronectin; cell attachment; cell detachment; fermentation; therapy.  
OS synthetic  
PN US4879237-A.  
PD 07-NOV-1989.  
PF 24-MAY-1985; 738078.  
PR 24-MAY-1989; US-738078.  
PA (JOLL-) La Jolla Cancer Res.  
PI Ruoslahti EI, Hayman EG, Pierschbacher MD;  
DR WPI; 90-154405/20.  
PT Synthetic peptide(s) from fibronectin- used in control of cell attachment  
PT and detachment  
PS Claim 1; page 10; 13pp; English.  
CC This polypeptide mediates the attachment of animal cells to substrates.  
CC The substrate (I) is contacted with cells and with a soln. contg. this  
CC polypeptide. This attachment can be prevented in addition to detaching  
CC the cells from (I) once attached. Applications are in eg fermentation,  
CC cell line prepn., diagnosis and therapy.  
SQ Sequence 6 AA;

Query Match 92.7%; Score 38; DB 1; Length 6;  
Best Local Similarity 66.7%; Pred. No. 1.84e+02;  
Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdap 6  
| | | : |  
QY 1 GRGESP 6

## RESULT 72

ID W07430 standard; peptide; 6 AA.  
AC W07430;  
DT 21-JAN-1997 (first entry)  
DE Synthetic, preferred tumour invasion-inhibitory peptide.  
KW Tumour invasion; extracellular matrix; ECM; metastasis; RGD sequence;  
KW cancer; inhibition; control.  
OS Synthetic.  
PN US5547936-A.  
PD 20-AUG-1996.  
PF 22-NOV-1983; 554821.  
PR 22-NOV-1983; US-554821.  
PR 17-JUN-1985; US-744981.  
PR 10-MAR-1988; US-166530.  
PR 09-SEP-1988; US-242713.  
PR 25-FEB-1991; US-660526.  
PR 10-APR-1991; US-683585.  
PR 08-OCT-1991; US-773106.  
PR 19-JUN-1992; US-902742.  
PR 17-DEC-1993; US-169743.  
PA (LJOL-) LA JOLLA CANCER RES FOUND.  
PI Gehlsen KR, Pierschbacher MD, Ruoslahti EI;  
DR WPI; 96-392651/39.  
PT Inhibiting tumour cell invasion through an extracellular matrix -  
PT using peptide contg. the RGD sequence, partic. for preventing tumour  
PT metastasis  
PS Claim 2; Column 7-8; 8pp; English.  
CC W07430 is a preferred peptide identified in an assay for testing  
CC peptides for tumour-invasion inhibitory activity. The peptides  
CC (contg. the RGD sequence) shows significant inhibition of tumour  
CC invasion of the ECM. Other peptides tested (see W07431-W06433) did  
CC show inhibitory activity but to a lesser extent than peptide W07430  
CC The peptides identified can be used to treat cancer and to prevent  
CC metastasis, in partic. invasion of the extracellular matrix (ECM).  
CC The peptides are soluble.  
SQ Sequence 6 AA;

Query Match 92.7%; Score 38; DB 19; Length 6;  
Best Local Similarity 66.7%; Pred. No. 1.84e+02;  
Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdtp 6  
| | | : |  
QY 1 GRGESP 6

## RESULT 73

ID R47384 standard; Protein; 6 AA.  
AC R47384;  
DT 22-JUN-1994 (first entry)  
DE PH-30 beta disintegrin control peptide.  
KW PH-20; PH-30; contraceptive; fertilisation; sperm surface protein;  
KW vaccine; sperm-egg fusion.  
OS Rubella virus.  
PN WO9325233-A.  
PD 23-DEC-1993.  
PF 10-JUN-1993; U05640.  
PR 12-JUN-1992; US-897883.  
PA (UYCO-) UNIV CONNECTICUT.  
PI Myles DG, Primakoff P;  
DR WPI; 94-007200/01.  
PT Contraceptive vaccine for reducing sperm-egg fusion - comprises  
PT peptide from sperm surface protein which stimulates antibody  
PT prodn.  
PS Example 7; Page 27; 79pp; English.  
CC Example 7 describes the use of PH-30 beta disintegrin peptides  
CC as inhibitors of sperm fusion to egg plasma membrane.  
CC Modified peptides R47382-83 and control peptides (R47384-85)

CC were tested. From observations it was concluded that the  
 CC PH-30 beta disintegrin domain represents an epitope which  
 CC is critical in sperm-egg fusion.  
 SQ Sequence 6 AA;

Query Match 92.7%; Score 38; DB 8; Length 6;  
 Best Local Similarity 66.7%; Pred. No. 1.84e+02;  
 Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgtdp 6  
 |||::|  
 QY 1 GRGESP 6

## RESULT 74

ID R11506 standard; Protein; 6 AA.

AC R11506;  
 DT 12-JUN-1991 (first entry)  
 DE Cell attachment promoting peptide.  
 KW Fibrin; aggregation.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT active site 2..4  
 PN USA988621-A.  
 PD 29-JAN-1991.  
 PF 10-DEC-1987; 131130.  
 PR 24-MAY-1985; US-738078.  
 PR 10-DEC-1987; US-131130.  
 PA (JOLL-) LA JOLLA CANCER FOU.  
 PI Ruoslahti EI, Hayman EG, Pierschbacher MD;  
 DR WPI: 91-116404/16.  
 PT Peptide(s) contg. arginine-glycine-aspartic acid sequence - used  
 PT to prevent and reverse cell attachment or to promote cell  
 PT aggregation.  
 PS Disclosure; Page 8; 12pp; English.  
 CC The peptide, or shorter versions contg. the RGD active site from  
 CC fibronectin, can be used to prevent and reverse attachment of cells  
 CC to substrates. This can be used in cell prodn., fermentation, cell  
 CC line prep., cell matrix prodn., diagnostics and therapy. The  
 CC peptide can be used for eg mobilisation of bone marrow cells;  
 CC prevention and reversal of attachment of disseminated tumour cells  
 CC locally such as in the case of an operation performed in the peri-  
 CC toneal cavity, to prevent adhesions and scar formations locally as  
 CC in the case of eye operations, for prophylactic inhibition of E. coli  
 CC binding to epithelial cells of the urinary tract or intestine,  
 CC diagnosis and treatment of E. coli related infections, and  
 CC identification of various pathogenic bacterial strains. The  
 CC peptide is pref. prepd. by solid phase synthesis.  
 CC See also R11505  
 CC Sequence 6 AA;

Query Match 92.7%; Score 38; DB 2; Length 6;  
 Best Local Similarity 66.7%; Pred. No. 1.84e+02;  
 Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdap 6  
 |||::|  
 QY 1 GRGESP 6

## RESULT 75

ID R36711 standard; peptide; 6 AA.

AC R36711;  
 DT 26-AUG-1993 (first entry)  
 DE Adhesion formation prevention RGD-contg. peptide.  
 KW Tissue repair; peritoneum; surgery; post-surgically; inhibition;  
 KW platelet aggregation; cardiovascular; orthopedic; thoracic;  
 OS Synthetic.  
 PN WO930818-A.  
 PD 13-MAY-1993.  
 PF 06-NOV-1992; U09494.  
 PR 07-NOV-1991; US-789231.

PA (UWSC-) UNIV SOUTHERN CALIFORNIA.  
 PI Dizerega GS, Rodgers KE;  
 DR WPI: 93-167381/20.

PT Prevention of adhesion formation, partic. post-surgically - comprises  
 PT administering a RGD-contg. peptide for a time sufficient to permit  
 PT tissue repair  
 PS Example; Page 18; 22pp; English.  
 CC The sequence is that of an RGD-contg. peptide which is used in a  
 CC method for prevention of adhesion formation for a time sufficient  
 CC to permit tissue repair. The method is used for minimising or  
 CC preventing adhesion formation, partic. in the peritoneum following  
 CC surgery, but also for e.g. cardiovascular, orthopedic, thoracic,  
 CC ophthalmic, CNS and other uses. In addn., the peptide inhibits  
 CC platelet aggregation and does not induce inflammation or trauma  
 CC at the site of administration.  
 SQ Sequence 6 AA;

Query Match 90.2%; Score 37; DB 7; Length 6;  
 Best Local Similarity 66.7%; Pred. No. 2.48e+02;  
 Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdnp 6  
 |||::|  
 QY 1 GRGESP 6

## RESULT 76

ID W07432 standard; peptide; 6 AA.

AC W07432;  
 DT 21-JAN-1997 (first entry)  
 DE Synthetic, weak, tumour invasion-inhibitory peptide.  
 KW Tumour invasion; extracellular matrix; ECM; metastasis; RGD sequence;  
 KW cancer; inhibition; control.  
 OS Synthetic.  
 PN US5547936-A.  
 PD 20-AUG-1996.  
 PF 22-NOV-1983; 554821.  
 PR 22-NOV-1983; US-554821.  
 PR 17-JUN-1985; US-744981.  
 PR 10-MAR-1988; US-166530.  
 PR 09-SEP-1988; US-242713.  
 PR 25-FEB-1991; US-660526.  
 PR 10-APR-1991; US-683585.  
 PR 08-OCT-1991; US-773106.  
 PR 19-JUN-1992; US-902742.  
 PR 17-DEC-1993; US-169743.  
 PA (JOLL-) LA JOLLA CANCER RES FOUND.  
 PI Gehlsen KR, Pierschbacher MD, Ruoslahti EI;  
 DR WPI: 96-392651/39.  
 PT Inhibiting tumour cell invasion through an extracellular matrix -  
 PT using peptide contg. the RGD sequence, partic. for preventing tumour  
 PT metastasis  
 PS Example 1; Column 7-8; 8pp; English.  
 CC W07431-W07433 are peptides identified in an assay for tumour-invasion  
 CC inhibitory activity. The peptides (contg. the RGD sequence) show a  
 CC weak inhibition of tumour invasion of the ECM. Another peptide tested  
 CC (see W07430) showed a significant inhibitory activity. The peptides  
 CC identified can be used to treat cancer and to prevent metastasis, in  
 CC partic. invasion of the extracellular matrix (ECM).  
 CC The peptides are soluble.  
 SQ Sequence 6 AA;

Query Match 90.2%; Score 37; DB 19; Length 6;  
 Best Local Similarity 66.7%; Pred. No. 2.48e+02;  
 Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgdnp 6  
 |||::|  
 QY 1 GRGESP 6

## RESULT 77

ID W25181 standard; peptide; 6 AA.

AC W25181;  
 DT 05-JAN-1998 (first entry)  
 DE RGD-peptide capable of binding cell adhesion molecules.  
 KW RGD; arginine; glycine; aspartic acid; cell adhesion molecule;  
 KW binding; bladder irrigation; tumour removal; endoscopic operation;  
 KW transurethral resection; cancer; neoplasia.  
 OS Synthetic.  
 PN DE19529909-A1.  
 PD 20-FEB-1997.  
 PF 15-AUG-1995; 029909.  
 PR 15-AUG-1995; DE-029909.  
 PA (FREP) FRESENIUS AG.  
 PI Boehle A;  
 DR WPI; 97-133793/13.  
 PT Endoscopic irrigation solns. - contg. peptide(s) that bind to cell  
 adhesion molecules  
 PS Claim 5; Page 8; 8pp; German.  
 CC W25173-W25186 are peptides containing an RGD sequence or equivalent.  
 CC The peptides are capable of binding to cell adhesion molecules and  
 CC are used in aqueous irrigation solutions for use during and after  
 CC endoscopic operations. Preferred irrigation solutions are  
 CC electrolyte-free and contain 1 microg/ml to 100 mg/ml of one or more  
 CC oligopeptides containing the amino acid sequences: RGD, LDV, IDA, DGEA,  
 CC GRAP, VTL, YIGSR, KOAGDV and/or REDV (given in one letter amino acid  
 CC code). The solutions are especially used for irrigating the bladder  
 CC during and after tumour removal by transurethral resection. The  
 CC peptides protect against recurrence of tumours.  
 SQ Sequence 6 AA;  
 Query Match 90.2%; Score 37; DB 24; Length 6;  
 Best Local Similarity 66.7%; Pred. No. 2.48e+02;  
 Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;  
 Db 1 grgndp 6  
 |||::|  
 QY 1 GRGESP 6

RESULT 78  
 ID W43308 standard; peptide; 5 AA.  
 AC W43308;  
 DT 03-APR-1998 (first entry)  
 DE Control peptide.  
 KW Osteopontin; inflammation; nitric oxide; gamma-interferon; gamma-IFN;  
 KW lipopolysaccharide; ischaemia; septic shock; lipopolysaccharide.  
 OS Synthetic.  
 PN US5695761-A.  
 PD 09-DEC-1997. 173116.  
 PF 23-DEC-1993; US-173116.  
 PR (UYNE-) UNIV NEW JERSEY MEDICINE & DENTISTRY.  
 PA (RUTG) UNIV RUTGERS STATE.  
 PI Denhardt DT, Heck DE, Hwang S, Laskin DL, Laskin JD,  
 PI Lopez CA;  
 DR WPI; 98-041235/04.  
 PT Treatment of inflammatory disorders mediated by nitric oxide - with  
 PT osteopontin protein or peptide(s)  
 PS Example 1; Column 19; 22pp; English.  
 CC The invention relates to a 20 amino acid fragment of osteopontin  
 CC that contains an epitope GRGDS and suppresses expression of inducible  
 CC nitric oxide synthase mRNA. A 100-fold molar excess of the peptide  
 CC GRGDS, but not the present control peptide GRGES, was able to reverse  
 CC osteopontin-mediated suppression of gamma-interferon-induced nitric oxide  
 CC production. The molecule of the invention is useful for treating an  
 CC inflammatory disease or disorder associated with nitric oxide activity  
 CC and/or gamma-interferon (gamma-IFN) or lipopolysaccharide, especially  
 CC ischaemia, septic shock and cell-mediated immune response, located in  
 CC the inner ear or kidney.  
 SQ Sequence 5 AA;  
 Query Match 80.5%; Score 33; DB 27; Length 5;  
 Best Local Similarity 100.0%; Pred. No. 8.05e+02;  
 Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 grges 5  
 |||||  
 QY 1 GRGES 5

RESULT 79  
 ID R04611 standard; protein; 5 AA.  
 AC R04611;  
 DT 05-SEP-1990 (first entry)  
 DE Antiviral agent.  
 KW Antiviral; M2; poliovirus; polio; hepatitis.  
 OS Synthetic.  
 PN J02078631-A.  
 PD 19-MAR-1990.  
 PF 14-SEP-1988; 228843.  
 PR 14-SEP-1988; JP-228843.  
 PA (NIHA) Nippon Mining KK.  
 DR WPI; 90-129060/17.  
 PT Antiviral agent contg. tri:peptide (unit) -  
 PT of basic aminoacid, then alanine, glycine or sarcosine, and  
 PT acidic aminoacid, effective against virus with protein-terminated DNA  
 PT or RNA.  
 PS Disclosure; 4pp; Japanese.  
 CC Peptide is effective against inhibiting propagation of DNA or RNA  
 CC bonded, protein containing viruses eg. Poliovirus, Hepatitis virus.  
 SQ Sequence 5 AA;

Query Match 80.5%; Score 33; DB 1; Length 5;  
 Best Local Similarity 100.0%; Pred. No. 8.05e+02;  
 Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 grges 5  
 |||||  
 QY 1 GRGES 5

RESULT 80  
 ID R47385 standard; Protein; 5 AA.  
 AC R47385;  
 DT 22-JUN-1994 (first entry)  
 DE PH-30 beta disintegrin control peptide.  
 KW PH-20; PH-30; contraceptive; fertilisation; sperm surface protein;  
 KW vaccine; sperm-egg fusion.  
 OS Rubella virus.  
 PN W09325233-A.  
 PD 23-DEC-1993.  
 PF 10-JUN-1993; U05640.  
 PR 12-JUN-1992; US-897883.  
 PA (UYCO-) UNIV CONNECTICUT.  
 PI Myles DG, Primakoff P;  
 DR WPI; 94-007200/01.  
 PT Contraceptive vaccine for reducing sperm-egg fusion - comprises  
 PT peptide from sperm surface protein which stimulates antibody  
 PT prodn.  
 PS Example 7; Page 27; 79pp; English.  
 CC Example 7 describes the use of PH-30 beta disintegrin peptides  
 CC as inhibitors of sperm fusion to egg plasma membrane.  
 CC Modified peptides R47382-83 and control peptides (R47384-85)  
 CC were tested. From observations it was concluded that the  
 CC PH-30 beta disintegrin domain represents an epitope which  
 CC is critical in sperm-egg fusion.  
 SQ Sequence 5 AA;

Query Match 80.5%; Score 33; DB 8; Length 5;  
 Best Local Similarity 100.0%; Pred. No. 8.05e+02;  
 Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 grges 5  
 |||||  
 QY 1 GRGES 5



RESULT 81  
 ID R70655 standard; peptide; 5 AA.  
 AC R70655;  
 DE 26-JUN-1995 (first entry)  
 DT Synthetic RGD peptide inhibits intercellular adhesion by fibronectin.  
 KW RGD peptide; competitor; fibronectin; inhibition; RGD-lipid derivative;  
 KW intercellular adhesion; suppress transfer of cancer cell; liposome.  
 OS Synthetic.  
 FH key Location/Qualifiers  
 FT modified\_site 1  
 FT modified\_site 5..5 /note= "H-Arg"  
 FT modified\_site 5..5 /note= "Pro-NH-(CH2CH2O)3-n-C18H37-2HCl"  
 FT  
 PN J06219967-A.  
 PD 09-AUG-1994.  
 PF 22-JAN-1993; 009290.  
 PR 22-JAN-1993; JP-009290.  
 PA (DDSK-) DDS KENYUSHO KK.  
 DR WPI; 94-312661/39.  
 PT New peptide-lipid derivs. bound directly or via linker to lipid -  
 PT useful for inhibiting mouse lung cancer cell line, 3LL cell  
 PT adhesion by fibronectin  
 PS Example; Page 4; 12pp; Japanese.  
 CC R70651-56 are RGD contg. peptides that can bind to cancer cells. The  
 CC exogenous peptides compete with fibronectin and inhibit  
 CC intercellular adhesion by fibronectin. The peptides are bound  
 CC directly or via a linker to a lipid. A liposome suspension contg.  
 CC RGD peptide was found to effectively suppress 3LL cell adhesion by  
 CC fibronectin, in the mouse lung cancer cell line.  
 SQ Sequence 5 AA;

Query Match 80.5%; Score 33; DB 12; Length 5;  
 Best Local Similarity 80.0%; Pred. No. 8.05e+02;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 rgdsp 5  
 ||:|  
 QY 2 RGESP 6

RESULT 82  
 ID R26813 standard; peptide; 5 AA.  
 AC R26813;  
 DT 18-FEB-1993 (first entry)  
 DE Polyethylene glycol derivative #4.  
 KW triazine ring; methoxy-polyethyleneoxy group; fibronectin; vitronectin;  
 KW platelet adhesion; metastasis; neuropathy.  
 OS Synthetic.  
 PN J04217693-A.  
 PD 07-AUG-1992.  
 PF 30-NOV-1990; 333717.  
 PR 23-OCT-1990; JP-285172.  
 PA (FUJF ) FUJII PHOTO FILM CO LTD.  
 DR WPI; 92-312284/38.  
 PT Polyethylene glycol derivs. contg. peptide(s) - inhibit cellular  
 PT adhesion for fibronectin or vitronectin and are used to inhibit  
 PT agglutination or adhesion of platelets  
 PS Disclosure; Page 4; 9pp; Japanese.  
 CC The sequences given in R26810-14 are examples of a peptide chain  
 CC which is attached once or twice to a triazine ring which is also  
 CC substituted twice or once, respectively, with a methoxy-polyethyleneoxy  
 CC group. These peptides can be used to inhibit cellular adhesion to  
 CC fibronectin or vitronectin and they are useful as inhibitors for  
 CC agglutination or adhesion of platelets. They can also be useful as  
 CC inhibitors for metastasis of cancers, inhibitors of agglutination of  
 CC platelets caused by tumour cells in the blood capillaries, and drugs  
 CC acting on neuropathy.  
 SQ Sequence 5 AA;

Query Match 80.5%; Score 33; DB 5; Length 5;  
 Best Local Similarity 80.0%; Pred. No. 8.05e+02;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 rgdsp 5

Db 1 rgdsp 5  
 ||:|  
 QY 2 RGESP 6

RESULT 83  
 ID R70474 standard; peptide; 5 AA.  
 AC R70474;  
 DT 20-DEC-1995 (first entry)  
 DE Cancer metastasis inhibitory RGD peptide derivative #2.  
 KW Cancer metastasis; adhesive peptide; core sequence; dextran; cancer;  
 KW water soluble polysaccharide; metastasis; wound; immunogenicity.  
 OS Synthetic.  
 PN J07089999-A.  
 PD 04-APR-1995.  
 PF 17-SEP-1993; 254779.  
 PR 17-SEP-1993; JP-254779.  
 PA (JAPG ) NIPPON ZEON KK.  
 DR WPI; 95-167254/22.  
 PT Cancer metastasis inhibitive peptide derivs. - useful for inhibition  
 PT of cancer metastasis, healing of wounds and regulation of  
 PT immunogenicity.  
 PS Disclosure; Page 2; 6pp; Japanese.  
 CC The peptides R70472-90 and R82907-24 are peptide derivatives which  
 CC inhibit cancer metastasis. They are composed of an adhesive peptide with  
 CC a core sequence selected from: RGD (R70472-85), YIGSR (R70486-90) or  
 CC other sequence (R82907-24), linked to a water soluble polysaccharide,  
 CC preferably a water soluble dextran, at the C-terminus. The peptides are  
 CC useful in inhibiting cancer metastasis, healing wounds and the regulation  
 CC of immunogenicity.  
 SQ Sequence 5 AA;

Query Match 80.5%; Score 33; DB 14; Length 5;  
 Best Local Similarity 80.0%; Pred. No. 8.05e+02;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 rgdsp 5  
 ||:|  
 QY 2 RGESP 6

RESULT 84  
 ID R25319 standard; peptide; 6 AA.  
 AC R25319;  
 DT 17-MAR-1993 (first entry)  
 DE Cell contact inhibitor generic peptide #8.  
 KW Cyclic peptide; cell contact inhibitor; hydrolytic enzyme.  
 OS Synthetic.  
 FH key Location/Qualifiers  
 FT modified\_site 2  
 FT modified\_site 2 /label= MeGly  
 PN J04264097-A.  
 PD 18-SEP-1992.  
 PF 16-FEB-1991; 044386.  
 PR 16-FEB-1991; JP-044386.  
 PA (ASAG ) ASahi GLASS CO LTD.  
 DR WPI; 92-361922/44.  
 PT Peptide derivs. as contact inhibitor for animal cells - comprise  
 PT synthesised cyclic peptide and have portion of aminoacid sequence  
 PT of arginine-N-methylglycine-aspartic acid  
 PS Disclosure; Page 3; 6pp; Japanese.  
 CC The sequences given in R25311-19 are cyclic peptides which act as  
 CC contact inhibitors of animal cells. They are resistant to  
 CC decomposition by hydrolytic enzymes and can be maintained at high  
 CC levels of activity for a long period in vivo. The peptides are  
 CC cyclic and may have 1-16 pref. 1-4 amino acids.  
 SQ Sequence 6 AA;

Query Match 80.5%; Score 33; DB 5; Length 6;  
 Best Local Similarity 80.0%; Pred. No. 8.05e+02;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 rgdsp 5

QY           ||:||  
          2 RGESP 6

## RESULT 85

ID W48518 standard; peptide; 6 AA.  
AC W48518;  
DE 18-AUG-1998 (first entry)  
KW Integrin receptor antagonist; cell adhesion modulator; leukocyte;  
KW extracellular matrix; fibronectin; ARDS; thrombosis; inflammation.  
OS Synthetic.  
FH Key           Location/Qualifiers  
FT Modified\_site 1.6  
FT           /Note= "Amide linkage between alpha amino group of  
FT           Arg and side chain carboxyl group of Glu"  
FT Modified\_site 6           /Note= "C-terminal amide"  
PN US5721210-A.  
PD 24-FEB-1998.  
PF 07-JUN-1995; 485019.  
PR 04-JUN-1993; US-961889.  
PR 09-JUL-1990; US-550330.  
PR 09-JUL-1991; WO-004862.  
PR 07-JUN-1995; US-485019.  
PA (TANA ) TANABE SEIYAKU CO.  
PI Cardarelli PM, Chiang S, Lobl TJ;  
PT WPI; 98-168442/15.  
PT New cyclic peptide(s) and peptidomimetic compounds - are integrin  
PT receptor antagonists useful in modulating cell adhesion.  
PS Example 9; Column 42; 32pp; English.  
CC The present sequence represents a synthetic peptide which  
CC acts as an antagonist to integrin receptors. The invention provides  
CC various synthetic peptides which act as cell adhesion modulators because  
CC they mimic extra-cellular matrix ligands or other cell adhesion ligands  
CC that bind to receptors such as integrin receptors, including fibronectin,  
CC laminin, LFA-1, MAC-1, p150,95, vitronectin and gp11b/IIb receptors.  
CC Some of the peptides contain the amino acid sequence Arg-Gly-Asp (RGD).  
CC Others contain non-RGD sequences, for e.g RGD sequences, and reverse  
CC orientation forms of amino acid residues. The synthetic peptides  
CC are useful in modulating cell adhesion, including adhesion related to  
CC fibronectin, as well as leukocyte adhesion to endothelial cells. They  
CC are also claimed to be useful in the study, diagnosis, treatment or  
CC prevention of diseases which relate to cell adhesion, e.g. adult  
CC respiratory distress syndrome (ARDS), thrombosis and inflammatory  
CC conditions.  
SQ Sequence 6 AA;

Query Match           80.5%; Score 33; DB 31; Length 6;  
Best Local Similarity 80.0%; Pred. No. 8.05e+02;  
Matches   4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db           1 rgdsp 5  
          ||:||  
QY           2 RGESP 6

## RESULT 86

ID R29075 standard; peptide; 6 AA.  
AC R29075;  
DE 17-FEB-1993 (first entry)  
KW Gelatin deriv. peptide contg. RGD motif.  
KW Adhesive peptide; cell adhesion; inhibitor; platelet aggregation.  
OS Synthetic.  
FH Key           Location/Qualifiers  
FT modified\_site 1           /Note= "alkylated/arylated"  
FT           6           /Note= "alkylated/arylated"  
PN J04221400-A.  
PD 11-AUG-1992.  
PF 30-NOV-1990; 333719.  
PR 26-OCT-1990; JP-289492.

PA (FUJIF ) FUJII PHOTO FILM CO LTD.

DR WPI; 92-313683/38.  
PT Gelatin deriv. with adhesive peptide side chain - used for animal  
PT cell adhesion inhibitor and platelet aggregation-adhesion inhibitor  
PS Example; Page 13; 10pp; Japanese  
CC The gelatin deriv. contains the Arg-Gly-Asp motif of cell adhering  
CC proteins. It comprises the essential unit of a water-sol. vinyl  
CC polymer with a pref. mol. wt. of 3000-100,000 D. The polymer shows  
CC various biological activities, e.g. immunological coordination, wound  
CC healing action and platelet aggregation inhibiting action etc.  
CC See also R29069-74.  
SQ Sequence 6 AA;

Query Match           80.5%; Score 33; DB 5; Length 6;  
Best Local Similarity 80.0%; Pred. No. 8.05e+02;  
Matches   4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db           2 rgdsp 6  
          ||:||  
QY           2 RGESP 6

## RESULT 87

ID W68568 standard; peptide; 6 AA.  
AC W68568;  
DE 25-JAN-1999 (first entry)  
KW Cell conformationally constrained RGD peptide #5.  
KW Cell adhesion motif; RGD motif; affinity; receptor; stereochemistry;  
KW conformation; cyclisation; medical device; prosthesis; implant;  
KW cell attachment.  
OS Synthetic.  
PN US5827821-A.  
PD 27-OCT-1998.  
PF 16-JUL-1992; 914643.  
PR 29-DEC-1988; US-292517.  
PR 10-DEC-1987; US-131390.  
PR 15-OCT-1991; US-776839.  
PR 16-JUL-1992; US-914643.  
PA (BURN-) BURNHAM INST.  
PI Pierschbacher MD, Ruoslahti EI;  
DR WPI; 98-594031/30.  
PT New synthetic peptides - used for in vivo applications such as  
PT coating of medical devices, including prosthesis and implants, to  
PT aid the attachment of cells  
PS Disclosure; Column 5; 11pp; English.  
CC This is an example of a novel type of peptide containing the cell  
CC adhesion motif Arg-Gly-Asp (RGD) of formula: X-R1-R2-Arg-Gly-Asp-R3-R4-Y,  
CC where R2 = 0-5 amino acids; R3 = 0-5 amino acids; R1, R4 = amino acids  
CC connected by a bridge; X = H or one or more amino acids; and Y = OH, NH2  
CC or one or more amino acids. Preferably the novel peptides have 5-30 amino  
CC acid residues. The peptides have high affinity and specificity for their  
CC receptors by virtue of restrictions on their stereochemical conformation,  
CC restrictions which are provided by cyclisation. The peptides have various  
CC applications relating to their cell-adhesion properties e.g. as coatings  
CC of medical devices, including prosthesis and implants, to aid the  
CC attachment of cells. The peptides also have in vitro uses in coating of  
CC substrates, such as cell culture substrates, to promote cell adhesion.

Query Match           80.5%; Score 33; DB 37; Length 6;  
Best Local Similarity 80.0%; Pred. No. 8.05e+02;  
Matches   4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db           2 rgdsp 6  
          ||:||  
QY           2 RGESP 6

## RESULT 88

ID W66827 standard; peptide; 6 AA.  
AC W66827;  
DE 10-DEC-1998 (first entry)  
DE peptide useful for altering bone resorption.

bone resorption; pharmacore; angiogenesis; restenosis; integrin receptor;  
 KW alpha v beta 3 integrin receptor; osteoclast; cyclic.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT Modified\_site 6  
 FT /note= "C-terminal amide"  
 PN US5807819-A.  
 PD 15-SEP-1998.  
 PF 12-APR-1995; 421698.  
 PR 12-APR-1995; US-421698.  
 PR 15-APR-1994; US-227316.  
 PR 08-SEP-1994; US-303052.  
 PA (LJOL-) LA JOLLA CANCER RES CENT.  
 PI Cheng S, Ingram R, Mullen D, Tschopp JF;  
 DR WPI: 98-555601/47.  
 PT - use of peptide derivatives which can alter integrin receptor binding  
 PT and altering bone resorption, treating angiogenesis or restenosis  
 PT and altering integrin receptor mediated interactions  
 PS Example 2: Figure 2B: 87pp; English.  
 CC A new method is claimed for altering bone resorption. It comprises  
 CC administration of a peptide of formula:  $\text{X1X2X3X4GX5X6X7X8}$ ; where X1 =  
 CC R1R2N or 0-10 amino acids (optionally protected by acetylation at the N-  
 CC terminus); X2 = absent or 1 amino acid; X3 = absent or 1 or 2 amino  
 CC acids; X4 = N-Me-Arg; X5 = residue which provides an ionic interaction  
 CC with an integrin receptor, or is Msa, Psa or Tfsa; X6 = residue which  
 CC has an aliphatic side chain; a non-natural amino acid that is  
 CC hydrophobic; or Thr; X7 = a residue capable of forming a bond (i) with a  
 CC bridging amino acid of X2, (ii) with X3 when X2 is absent, or (iii) with  
 CC X4 when X2 and X3 are absent, to conformationally restrain the peptide;  
 CC X8 = NR3R4; OR5; or 0-10 amino acids, optionally protected as an amide at  
 CC the C-terminus; R1, R3-R5 = H or alkyl; R2 = H, alkyl, alkyl-CO or  
 CC phenyl-CO. The peptides are useful for inhibiting bone resorption,  
 CC angiogenesis or restenosis, and for altering integrin receptor-mediated  
 CC interactions, especially alpha v beta 3 integrin receptor-mediated  
 CC binding of cells to a matrix. They may be used for reducing or inhibiting  
 CC osteoclast binding to a matrix. The present sequence represents an  
 CC example of a circular peptide disclosed in the specification.  
 SQ Sequence 6 AA;  
 Query Match 80.5%; Score 33; DB 36; Length 6;  
 Best Local Similarity 80.0%; Pred. No. 8.05e+02;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
 Db 1 rgdsp 5  
 QY ||:||  
 2 RGESP 6  
 RESULT 89  
 ID W48577 standard; peptide; 6 AA.  
 AC W48577;  
 DT 18-AUG-1998 (first entry)  
 DE Integrin receptor antagonist peptide 116.  
 KW Integrin receptor antagonist; cell adhesion modulator; leukocyte;  
 KW extracellular matrix; fibronectin; ARDS; thrombosis; inflammation.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT Modified\_site 1..6  
 FT /note= "Amide linkage between the alpha amino group  
 FT of Arg and the side chain carboxyl group of Asp"  
 FT Modified\_site 6  
 FT /note= "C-terminal amide"  
 PN US5721210-A.  
 PD 24-FEB-1998.  
 PF 07-JUN-1995; 485019.  
 PR 04-JUN-1993; US-961889.  
 PR 09-JUL-1990; US-550330.  
 PR 09-JUL-1991; WO-004862.  
 PR 07-JUN-1995; US-485019.  
 PA (TANA) TANABE SEIYAKU CO.  
 PI Cardarelli PM, Chiang S, Lobl TJ;  
 DR WPI: 98-168442/15.  
 PT New cyclic peptide(s) and peptidomimetic compounds - are integrin

receptor antagonists useful in modulating cell adhesion.  
 PS Example 9: Column 44; 32pp; English.  
 CC The present sequence represents a synthetic peptide which  
 CC acts as an antagonist to integrin receptors. The invention provides  
 CC various synthetic peptides which act as cell adhesion modulators because  
 CC they mimic extra-cellular matrix ligands or other cell adhesion ligands  
 CC that bind to receptors such as integrin receptors, including fibronectin,  
 CC laminin, LFA-1, MAC-1, p150, 95, vitronectin and gp1b/IIb receptors.  
 CC Some of the peptides contain the amino acid sequence Arg-Gly-Asp (RGD).  
 CC Others contain non-RGD sequences, for e.g RCD sequences, and reverse  
 CC orientation forms of amino acid residues. The synthetic peptides  
 CC are useful in modulating cell adhesion, including adhesion related to  
 CC fibronectin, as well as leukocyte adhesion to endothelial cells. They  
 CC are also claimed to be useful in the study, diagnosis, treatment or  
 CC prevention of diseases which relate to cell adhesion, e.g. adult  
 CC respiratory distress syndrome (ARDS), thrombosis and inflammatory  
 CC conditions.  
 SQ Sequence 6 AA;  
 Query Match 80.5%; Score 33; DB 31; Length 6;  
 Best Local Similarity 80.0%; Pred. No. 8.05e+02;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
 Db 1 rgdsp 5  
 QY ||:||  
 2 RGESP 6  
 RESULT 90  
 ID R96371 standard; peptide; 6 AA.  
 AC R96371.  
 DT 05-JUL-1996 (first entry)  
 DE RGD cyclic peptide, TL825, binds alpha-v, beta3 integrin receptor.  
 KW RGD-containing peptide; alpha-v, beta-3 integrin receptor; osteoclast;  
 KW matrix; bone; inhibition; bone resorption; promote; endothelial cell;  
 KW smooth muscle cell; restenosis; angiogenesis; cyclic.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT Modified\_site 1  
 FT /note= "forms lactam bridge with Glu(6)"  
 FT modified\_site 6  
 FT /note= "forms lactam bridge with Arg(1), amidated  
 FT C-terminal"  
 PN W09528426-A2.  
 PD 26-OCT-1995.  
 PF 12-APR-1995; U04741.  
 PR 13-APR-1994; US-227316.  
 PR 08-SEP-1994; US-303052.  
 PA (LJOL-) LA JOLLA CANCER RES FOUND.  
 PI Cheng S, Ingram R, Mullen D, Tschopp J;  
 DR WPI: 95-373767/48.  
 PT Altering alpha-v, beta-3 integrin receptor-mediated binding of cell  
 PT to matrix - using conformationally restrained peptide of RGD type,  
 PT e.g. for treating inappropriate angiogenesis or for inhibiting bone  
 PT resorption  
 PS Claim 85; Page 79; 99pp; English.  
 CC The sequences given in R96301-417 are non-naturally occurring RGD-  
 CC containing peptides which alter the alpha-v, beta-3 integrin receptor  
 CC binding of a cell to a matrix, such as the binding of an osteoclast to  
 CC a matrix such as bone. These peptides inhibit bone resorption and can  
 CC inhibit or promote alpha-v, beta-3-mediated cell attachment depending  
 CC on whether they are present in the cell in a soluble form or are bound  
 CC to a solid substrate. These peptides can be used in the amelioration  
 CC of the severity of a pathology involving alpha-v, beta-3 receptor-  
 CC mediated binding of a cell, such as an osteoclast, endothelial cell or  
 CC smooth muscle cell to a matrix. They are used for treating conditions  
 CC associated with restenosis or inappropriate or insufficient angiogenesis,  
 CC or for inhibiting osteoclast binding to the matrix.  
 SQ Sequence 6 AA;  
 Query Match 80.5%; Score 33; DB 16; Length 6;  
 Best Local Similarity 80.0%; Pred. No. 8.05e+02;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 rgdsp 5  
||:|  
Qy 2 RGESP 6

RESULT 91  
ID R70475 standard; peptide; 6 AA.  
AC R70475;  
DT 20-DEC-1995 (first entry)  
DE Cancer metastasis inhibitory RGD peptide derivative #3.  
KW Cancer metastasis; adhesive peptide; core sequence; dextran; cancer;  
water soluble polysaccharide; metastasis; wound; immunogenicity.  
OS Synthetic.  
PN J07089999-A.  
PD 04-APR-1995.  
PF 17-SEP-1993; 254779.  
PR 17-SEP-1993; JP-254779.  
PA (JAPG ) NIPPON ZEON KK.  
DR WPI; 95-167254/22.  
PT Cancer metastasis inhibitive peptide derivs. - useful for inhibition  
of cancer metastasis, healing of wounds and regulation of  
immunogenicity.  
PS Disclosure; Page 2; 6pp; Japanese.  
CC The peptides R70472-90 and R82907-24 are peptide derivatives which  
inhibit cancer metastasis. They are composed of an adhesive peptide with  
a core sequence selected from: RGD (R70472-85), YIGSR (R70486-90) or  
other sequence (R82907-24), linked to a water soluble polysaccharide,  
preferably a water soluble dextran, at the C-terminus. The peptides are  
useful in inhibiting cancer metastasis, healing wounds and the regulation  
of immunogenicity.  
SQ Sequence 6 AA;

Query Match 80.5%; Score 33; DB 14; Length 6;  
Best Local Similarity 80.0%; Pred. No. 8.05e+02;  
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 rgdsp 5  
||:|  
Qy 2 RGESP 6

RESULT 92  
ID R34451 standard; peptide; 5 AA.  
AC R34451;  
DT 02-AUG-1993 (first entry)  
DE Fibronectin-like binding motif.  
KW Immunoglobulin D; oligosaccharide; N-glycosylation; region.  
KW IgD antigen receptor complex; delta chain constant region.  
OS Homo sapiens.  
FH Key Location/Qualifiers  
FT binding\_site 2..4  
FT /note= "fibrinogen binding motif"  
PN W09307291-A.  
PD 15-APR-1993.  
PF 09-OCT-1992; U08724.  
PR 11-OCT-1991; US-773328.  
PA (UUNY ) UNIV NEW YORK STATE.  
PI Amin AR, Oppenheim JD, Thorbecke GJ;  
DR WPI; 93-134476/15.  
PT Use of immunoglobulin D-associated glycan cpds. - for inhibiting  
PT immune response, treating immune-mediated disease and enhancing  
PT immune response  
PS Disclosure; Page 53; 77pp; English.  
CC This pentapeptide sequence comprises the RGD motif typical of cell  
adhesion molecules, including fibronectin.  
SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 7; Length 5;  
Best Local Similarity 80.0%; Pred. No. 1.07e+03;  
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 rgdsp 5

||:|  
Qy 1 GRGES 5

RESULT 93  
ID R36714 standard; peptide; 5 AA.  
AC R36714;  
DT 26-AUG-1993 (first entry)  
DE Adhesion formation prevention RGD-contg. peptide.  
KW Tissue repair; peritoneum; surgery; post-surgically; inhibition;  
platelet aggregation; cardiovascular; orthopedic; thoracic;  
ophthalmic; CNS; use.  
OS Synthetic.  
PN W09308818-A.  
PD 13-MAY-1993.  
PF 06-NOV-1992; U09494.  
PR 07-NOV-1991; US-789231.  
PA (UYSC-) UNIV SOUTHERN CALIFORNIA.  
PI Dizerega GS, Rodgers KE;  
DR WPI; 93-167381/20.  
PT Prevention of adhesion formation, partic. post-surgically - comprises  
administering a RGD-contg. peptide for a time sufficient to permit  
tissue repair  
PS Example; Page 18; 22pp; English.  
CC The sequence is that of an RGD-contg. peptide which is used in a  
method for prevention of adhesion formation for a time sufficient  
to permit tissue repair. The method is used for minimising or  
preventing adhesion formation, partic. in the peritoneum following  
surgery, but also for e.g. cardiovascular, orthopedic, thoracic,  
ophthalmic, CNS and other uses. In addn., the peptide inhibits  
platelet aggregation and does not induce inflammation or trauma  
at the site of administration.  
SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 7; Length 5;  
Best Local Similarity 80.0%; Pred. No. 1.07e+03;  
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5  
||:|  
Qy 1 GRGES 5

RESULT 94  
ID R62948 standard; peptide; 5 AA.  
AC R62948;  
DT 15-AUG-1995 (first entry)  
DE RGD contg. peptide is a constituent of a cancer metastasis inhibitor.  
KW RGD peptide; Arg-Gly-Asp; cancer metastasis inhibitor;  
high cell adhesion; fibronectin.  
OS Synthetic.  
PN J06306096-A.  
PD 01-NOV-1994.  
PF 31-JAN-1994; 009893.  
PR 26-FEB-1993; JP-038677.  
PA (FUJF ) FUJI PHOTO FILM CO LTD.  
DR WPI; 95-019276/03.  
PT Peptide deriv. comprising several copies of the sequence  
PT Arg-Gly-asp - covalently bonded to organic molecule, useful as  
PT cancer metastasis inhibitor  
PS Disclosure; Page 3; 13pp; Japanese.  
CC R62945-50 are RGD contg. peptides that form constituents of an organic  
mol. with a defined copy number of one of the peptides. The organic mol.  
contg. the RGD peptide is a cancer metastasis inhibitor. The deriv.  
shows substantially no toxicity and has a higher cell adhesion than the  
core sequence of fibronectin.  
SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 13; Length 5;  
Best Local Similarity 80.0%; Pred. No. 1.07e+03;  
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5

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CC m - 1-5;
CC n - 1-5;
CC R1, R2 - H or 8-24C acyl or alkyl;
CC R3 - 6-24C acyl;
CC z - hydroxyl or amino.
CC These peptides form the active part of drugs which are used for the
CC control of organ transplantation rejection or immune disorders such
CC as systemic lupus.
CC Sequence 5 AA;

Query Match 78.0%; Score 32; DB 8; Length 5;
Best Local Similarity 80.0%; Pred. No. 1.07e-03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5
QY 1 GRGES 5

RESULT 97
ID R24516 standard; Protein; 5 AA.
AC R24516;
DT 02-DEC-1992 (first entry)
DE Platelet antagonist peptide 3.
KW Clinical effect; antagonist.
OS Synthetic.
PN J04134096-A.
PD 07-MAY-1992.
PF 21-SEP-1990; 253849.
PR 21-SEP-1990; JP-253849.
PA (SEKK) SEIKAGAKU KOGYO CO LTD.
DR WPI; 92-204523/25.
PT New peptide(s) comprising arginine-glycine-asparagine and
PT hyaluronic acid - useful as platelet antagonists with higher
PT activity than arginine-glycine-asparagine-valine
PS Disclosure; Page 5; 10pp; Japanese.
CC The sequences given in R24514-8 are peptides which are useful as
CC platelet antagonists. These peptides have higher activity than the
CC conventional peptide of Arg-Gly-Asp-Val. These peptides have a
CC clinical effect at a lower dose, dosage is 2.5-5.0 mg/kg/day.
CC Sequence 5 AA;

Query Match 78.0%; Score 32; DB 5; Length 5;
Best Local Similarity 80.0%; Pred. No. 1.07e-03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5
QY 1 GRGES 5

RESULT 98
ID R48654 standard; peptide; 5 AA.
AC R48654;
DT 21-SEP-1994 (first entry)
DE RGD containing peptide #3 for attaching cells to a solid carrier.
KW RGD; solid substrate; solid carrier; attachment; culture;
KW anchorage dependant cells; receptor; cell surface; release.
OS Synthetic.
PN EP-587205-A.
PD 16-MAR-1994.
PF 19-JUL-1993; 202102.
PR 23-JUL-1992; EP-202261.
PA (DUIN) DUPHAR INT RES BV.
PI Brands R, Smeek MC;
DR WPI; 94-085139/11.
PT Solid carrier for culture of anchorage dependent cells -
PT non-covalently coated with a polypeptide contained specific
PT sequence for easy attachment and detachment of cells
PS Example 1; Page 3; 7pp; English.
CC The sequences given in R4852-54 are RGD containing peptides which
CC are used to coat a solid substrate in the production of a solid
CC carrier suitable for the attachment of cells. The peptide molecules

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QY 1 GRGES 5

RESULT 95
ID R55076 standard; peptide; 5 AA.
AC R55076;
DT 16-DEC-1994 (first entry)
DE Fibronectin gelatin binding domain inhibitory peptide.
KW Fibronectin; collagen-binding proteins; inhibit cell adhesion;
KW regulate cell matrix interactions; tumorigenesis; metastasis;
KW wound repair; homostasis; thrombospondin.
OS Synthetic.
PN W09411395-A.
PD 26-MAY-1994.
PF 09-NOV-1993; U11104.
PR 06-NOV-1992; US-973235.
PA (LUBR) LUBRIZOL CORP.
PA (USSH) US SEC DEPT HEALTH.
PI Huang NZ, Kolp CJ, Sgarlata CR, Guo N, Krutzsch HC;
PI Negre E, Roberts DD, Sipes JM;
DR WPI; 94-183422/22.
PT Peptides which bind to fibronectin and collagen-binding proteins
PT - are used to inhibit fibronectin dependent cell adhesion to
PT collagen matrices
PS Disclosure; Page 36; 51pp; English.
CC Thrombospondin is a multi-functional protein capable of interacting
CC with numerous molecules, eg. fibronectin. Peptides have been
CC designed that are derived from the second type I repeat of human
CC endothelial cell thrombospondin. The peptides can be used to bind to
CC fibronectin or other related collagen-binding proteins to inhibit
CC fibronectin-dependent cell adhesion to collagen matrices. The peptides
CC interact directly with the gelatin-binding domain of fibronectin
CC and inhibits the fibronectin function.
CC Sequence 5 AA;

Query Match 78.0%; Score 32; DB 10; Length 5;
Best Local Similarity 80.0%; Pred. No. 1.07e-03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5
QY 1 GRGES 5

RESULT 96
ID R44045 standard; peptide; 5 AA.
AC R44045;
DT 02-JUN-1994 (first entry)
DE RGD peptide derivative #3.
KW Drug; organ transplantation; rejection; immune disorder;
KW systemic lupus.
OS Synthetic.
FH Key Location/Qualifiers
FT modified_site 1 /note= "C15H31CO-Gly"
FT modified_site 4 /note= "Ser-OH"
FT J05255105-A.
PN 05-OCT-1993.
PD 16-MAR-1992; 058460.
PR 16-MAR-1992; JP-058460.
PA (FUJF) FUJII PHOTO FILM CO LTD.
DR WPI; 93-348360/44.
PT Immuno-control drug for organ transplant rejection etc. - contains
PT peptide having arginine, glycine, aspartic acid sequence
PS Disclosure; Page 3; 11pp; Japanese.
CC The sequences given in R44043-47 and R53144 represent examples of the
CC claimed RGD containing peptide of the invention. These peptides all
CC correspond to the generic formulae:
CC R02-(CH2)m-C(O)-([X]-Arg-Gly-Asp-[Y])n-O-CH2CH(OR1)CH2OR2 or
CC R3-([X]-Arg-Gly-Asp-[Y])n-Z
CC [X], [Y] = amino acid or peptide residues;

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CC are directly bound to the substrate by a non-covalent linkage. The  
 CC solid carrier may be used for culturing anchorage dependant cells.  
 CC The epitope RGD is recognised by receptors on the cell surface for  
 CC cell attachment. The cells are subsequently released from the  
 CC carrier by simply lowering the pH of the growth medium to below 7,  
 CC optionally in the presence of trypsin. The ready release of the  
 CC cells from the solid carrier minimises the damage to cell surface  
 CC proteins.  
 SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 9; Length 5;  
 Best Local Similarity 80.0%; Pred. No. 1.07e+03;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5  
 |||:  
 QY 1 GRGES 5

RESULT 99  
 ID R37131 standard; peptide; 5 AA.  
 AC R37131;  
 DT 19-APR-1994 (first entry)  
 DE RGD peptide deriv. #2.  
 KW Cell adhesion core sequence; inhibitor; cancer; metastasis; ss.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT modified\_site 1  
 FT /label= Suc-Gly  
 PN J05222092-A.  
 PD 31-AUG-1993.  
 PF 16-JUL-1992; 189446.  
 PR 18-DEC-1991; JP-335213.  
 PA (FUJF) FUJII PHOTO FILM CO LTD.  
 DR WPI: 93-309192/39.  
 PT Peptide derivs. used as cancer metastasis inhibitors - contain  
 PT the cell adhesion core sequence Arg-Gly-Asp followed by Ser  
 PS Disclosure; Page 3; 10pp; Japanese.  
 CC The sequences given in R37130-48 are peptide derivatives which  
 CC correspond to the generic formula; R1-X-Arg-Gly-Ser-R2; R1 = H  
 CC or an optionally substituted acyl, R2 = -OR3 or -NR4R5, R3, R4, R5 =  
 CC H or 1-3C alkyl, and X = a bond or an amino acid or peptide residue.  
 CC These peptide derivs. contain the cell adhesion core sequence Arg-  
 CC Gly-Asp. They are useful as inhibitors of cancer metastasis.  
 SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 8; Length 5;  
 Best Local Similarity 80.0%; Pred. No. 1.07e+03;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5  
 |||:  
 QY 1 GRGES 5

RESULT 100  
 ID W43306 standard; peptide; 5 AA.  
 AC W43306;  
 DT 03-APR-1998 (first entry)  
 DE Epitope found on osteopontin, useful for nitric oxide inhibition.  
 KW Osteopontin; inflammation; nitric oxide; gamma-interferon; gamma-IFN;  
 KW lipopolysaccharide; ischaemia; septic shock.  
 OS Homo sapiens.  
 PN US5695761-A.  
 PD 09-DEC-1997.  
 PF 23-DEC-1993; 173116.  
 PR 23-DEC-1993; US-173116.  
 PA (UYNE-) UNIV NEW JERSEY MEDICINE & DENTISTRY.  
 PA (RUTF) UNIV RUTGERS STATE.  
 PI Denhardt DT, Heck DE, Hwang S, Laskin DL, Laskin JD,  
 PI Lopez CA;  
 DR WPI: 98-041235/04.  
 PT Treatment of inflammatory disorders mediated by nitric oxide - with

PT osteopontin protein or peptide(s)  
 PS Claim 1; Column 27; 22pp; English.  
 CC This sequence represents an epitope found on osteopontin. The invention  
 CC relates to a molecule which inhibits nitric oxide (NO) production and  
 CC contains this epitope. It has a molecular weight of 2145-10000 daltons.  
 CC The molecule is useful for treating an inflammatory disease or  
 CC disorder associated with NO activity and/or gamma-interferon (gamma-IFN)  
 CC or lipopolysaccharide, especially ischaemia, septic shock and cell-  
 CC mediated immune response, located in the inner ear or kidney.  
 SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 27; Length 5;  
 Best Local Similarity 80.0%; Pred. No. 1.07e+03;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5  
 |||:  
 QY 1 GRGES 5

RESULT 101  
 ID W51241 standard; peptide; 5 AA.  
 AC W51241;  
 DT 12-AUG-1998 (first entry)  
 DE Peptide which inhibits angiogenesis in vitro.  
 KW Integrin alpha v beta 3 receptor; osteoporosis; restenosis; cancer;  
 KW arthritis; diabetic; retinopathy; disulphide; inhibitor.  
 OS Synthetic.  
 PN US5767071-A.  
 PD 16-JUN-1998.  
 PF 07-JUN-1995; 482106.  
 PR 07-JUN-1995; US-482106.  
 PA (IXSY-) IXSYS INC.  
 PI Huse WD, Lee BA, Palladino MA, Varner JA;  
 DR WPI: 98-361749/31.  
 PT New Non-RGD cyclic peptides that bind to integrin receptor - useful  
 PT for treating e.g. osteoporosis, restenosis, cancer, arthritis and  
 PT diabetic retinopathy  
 PS Disclosure; Column 1; 23pp; English.  
 CC The invention relates to cyclic, non Arg-Gly-Asp (non-RGD) peptides that  
 CC bind to the alpha v beta 3 integrin receptor and have the sequence Arg  
 CC Cys X1 Gly Asp Ser X2 Cys X3, where the cysteines are connected by a di-  
 CC sulphide bond, X1 is Gly, Ser or Ala, and X2 and X3 are any amino acids.  
 CC The peptides are useful for treating diseases involving alpha v beta 3  
 CC receptors e.g. osteoporosis, restenosis, cancer, arthritis and diabetic  
 CC retinopathy. The present sequence represents an Arg-Gly-Asp containing  
 CC peptide which inhibits angiogenesis in vitro.  
 SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 31; Length 5;  
 Best Local Similarity 80.0%; Pred. No. 1.07e+03;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5  
 |||:  
 QY 1 GRGES 5

RESULT 102  
 ID R29051 standard; peptide; 5 AA.  
 AC R29051;  
 DT 17-FEB-1993 (first entry)  
 DE Peptide lipid contg. RGD.  
 KW Synthetic; cell migration; inhibitor; cell adhesion membrane; cell  
 KW culture body.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT modified\_site 1  
 FT /note= "acylated"  
 FT modified\_site 5  
 FT /note= "alkylated"  
 PN J04221394-A.  
 PD 11-AUG-1992.

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PF 29-NOV-1990; 333335.
PR 26-OCT-1990; JP-289493.
PA (FUJIF ) FUJII PHOTO FILM CO LTD.
DR WPI; 92-313678/38.
PT New synthetic peptide lipid(s) and salts - useful as cell
PT migration inhibitors, cell adhesion membranes or cell culture
PT bodies
PS Disclosure; Page 3; 9pp; Japanese.
CC The peptide sequence is an example of a highly generic sequence contg.
CC the RGD motif. Compounds contg. these lipid peptides are useful as
CC cell migration inhibitors in cell adhesion membranes or cell culture
CC bodies. See also R29048-54.
SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 5; Length 5;
Best Local Similarity 80.0%; Pred. No. 1.07e+03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5
   |||:|
Qy 1 GRGES 5

RESULT 103
ID W65001 standard; peptide; 5 AA.
AC W65001.
DT 10-SEP-1998 (first entry)
DE Synthetic angiogenesis inhibiting peptide.
KW Angiogenesis; inhibitor; alpha-v beta-3 integrin receptor; treatment;
KW disease; diagnosis; immunoassay; detection; cancer; inflammation;
KW rheumatoid arthritis; osteoporosis; restenosis; retinopathy; glaucoma;
KW retinal neovascularisation; diabetic retinopathy; macular degeneration.
OS Synthetic.
PN US5780426-A.
PD 14-JUL-1998.
PF 07-JUN-1995; 482107.
PR 07-JUN-1995; US-482107.
PA (IXSY-) IXSYS INC.
PI Huse WD, Lee BA, Palladino MA, Varner JA;
DR WPI; 98-413114/35.
PT New non-RGD peptides with specific affinity for the alphav, beta3
PT integrin receptor - contain specific pentapeptide sequence, used for
PT treatment or prevention of particularly angiogenic disorders such as
PT cancer, inflammation, osteoporosis etc.
PS Disclosure; Column 1; 20pp; English.
CC W65001-W65010 are synthetic peptides used in an assay to determine which
CC peptides bind to and inhibit the alpha-v beta-3 integrin receptor. Such
CC inhibitors could be used to treat or prevent diseases mediated by the
CC alpha-v beta-3 integrin receptor, particularly angiogenic diseases, e.g.
CC cancer and their metastases, inflammation, rheumatoid arthritis,
CC osteoporosis, restenosis, retinal neovascularisation (glaucoma), diabetic
CC retinopathy and macular degeneration. The peptides are also useful for
CC diagnosis of such diseases by detecting or quantifying the receptor in
CC samples and can be used to raise antibodies useful as immunoassay
CC reagents.
SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 33; Length 5;
Best Local Similarity 80.0%; Pred. No. 1.07e+03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5
   |||:|
Qy 1 GRGES 5

RESULT 104
ID R35463 standard; peptide; 5 AA.
AC R35463;
DT 26-AUG-1993 (first entry)
DE Propene-amide deriv. polymer metastasis inhibitor.
KW Low toxicity; higher cell adhesion ability; metastasis inhibition.
OS Synthetic.

PF 29-NOV-1990; 333335.
PR 26-OCT-1990; JP-289493.
PA (FUJIF ) FUJII PHOTO FILM CO LTD.
DR WPI; 92-313678/38.
PT New synthetic peptide lipid(s) and salts - useful as cell
PT migration inhibitors, cell adhesion membranes or cell culture
PT bodies
PS Disclosure; Page 3; 9pp; Japanese.
CC The peptide sequence is an example of a highly generic sequence contg.
CC the RGD motif. Compounds contg. these lipid peptides are useful as
CC cell migration inhibitors in cell adhesion membranes or cell culture
CC bodies. See also R29048-54.
SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 7; Length 5;
Best Local Similarity 80.0%; Pred. No. 1.07e+03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5
   |||:|
Qy 1 GRGES 5

RESULT 105
ID R70477 standard; peptide; 5 AA.
AC R70477;
DT 20-DEC-1995 (first entry)
DE Cancer metastasis inhibitory RGD peptide derivative #5.
KW Cancer metastasis; adhesive peptide; core sequence; dextran; cancer;
KW water soluble polysaccharide; metastasis; wound; immunogenicity.
OS Synthetic.
PN J07089999-A.
PD 04-APR-1995.
PF 17-SEP-1993; 254779.
PR 17-SEP-1993; JP-254779.
PA (JAPG ) NIPPON ZEON KK.
DR WPI; 95-167254/22.
PT Cancer metastasis inhibitive peptide derivs. - useful for inhibition
PT of cancer metastasis, healing of wounds and regulation of
PT immunogenicity.
PS Disclosure; Page 2; 6pp; Japanese.
CC The peptides R70472-90 and R82907-24 are peptide derivatives which
CC inhibit cancer metastasis. They are composed of an adhesive peptide with
CC a core sequence selected from: RGD (R70472-85), YIGSR (R70486-90) or
CC other sequence (R82907-24), linked to a water soluble polysaccharide,
CC preferably a water soluble dextran, at the C-terminus. The peptides are
CC useful in inhibiting cancer metastasis, healing wounds and the regulation
CC of immunogenicity.
SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 14; Length 5;
Best Local Similarity 80.0%; Pred. No. 1.07e+03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5
   |||:|
Qy 1 GRGES 5

RESULT 106
ID W25177 standard; peptide; 5 AA.
AC W25177;
DT 05-JAN-1998 (first entry)
DE RGD-peptide capable of binding cell adhesion molecules.
KW RGD; arginine; glycine; aspartic acid; cell adhesion molecule;
KW binding; bladder irrigation; tumour removal; endoscopic operation;

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KW transurethral resection; cancer; neoplasia.
OS Synthetic.
PN DE1952909-A1.
PD 20-FEB-1997.
PF 15-AUG-1995; 029909.
PR 15-AUG-1995; DE-029909.
PA (FREP ) FRESSENIUS AG.
PI Boehle A;
DR WPI: 97-133793/13.
PT Endoscopic irrigation solns. - contg. peptide(s) that bind to cell
PT adhesion molecules
PS Claim 5: Page 8: 8pp; German.
CC W25173-W25186 are peptides containing an RGD sequence or equivalent.
CC The peptides are capable of binding to cell adhesion molecules and
CC are used in aqueous irrigation solutions for use during and after
CC endoscopic operations. Preferred irrigation solutions are
CC electrolyte-free and contain 1 microg/ml to 100 mg/ml of one or more
CC oligopeptides containing the amino acid sequences: RGD, LDV, IDA, DGEA,
CC GPRP, VTL, YIGSR, KGAGDV and/or REDV (given in one letter amino acid
CC code). The solutions are especially used for irrigating the bladder
CC during and after tumour removal by transurethral resection. The
CC peptides protect against recurrence of tumours.
SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 24; Length 5;
Best Local Similarity 80.0%; Pred. No. 1.07e+03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5
   |||:|
Qy 1 GRGES 5

RESULT 107
ID R07442 standard; peptide; 5 AA.
AC R07442;
DT 03-FEB-1991 (first entry)
DE Peptide with anti-metastasis activity.
KW Metastasis; cancer.
OS Synthetic.
FH Key Location/Qualifiers
FT misc_difference 2
   /label=Side chain
   /note="t-butyloxycarbonyl or sialic acid deriv. or H"
FT misc_difference 4..0
   /label=Side chain
   /note="Benzylloxycarbonyl or H"
PN J02233696-A.
PD 17-SEP-1990.
PF 06-MAR-1989; 053496.
PR 06-MAR-1989; JP-053496.
PA (MECT-) MECT KK.
DR WPI: 90-325187/43.
PT Penta peptide derivs. - and their prepn. for prevention of cancer
PT metastasis.
PS Claim 1; Page 1; 8pp; Japanese.
CC Peptide is useful in prevention of cancer metastasis and has a high
CC bioavailability.
SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 1; Length 5;
Best Local Similarity 80.0%; Pred. No. 1.07e+03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5
   |||:|
Qy 1 GRGES 5

RESULT 108
ID R27030 standard; peptide; 5 AA.
AC R27030;
DT 17-FEB-1993 (first entry)

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DE Peptide lipid contg. RGD.
KW Synthetic; cell migration; inhibitor; cell adhesion membrane; cell
OS Synthetic.
FH Key Location/Qualifiers
FT modified_site 1
   /note= "acylated"
FT modified_site 5
   /note= "alkylated"
FT J04221395-A.
PN 11-AUG-1992.
PD 29-NOV-1990; 333336.
PR 26-OCT-1990; JP-289494.
PA (FUJF ) FUJI PHOTO FILM CO LTD.
DR WPI: 92-313679/38.
PT New synthetic peptide lipid(s) and salts - useful as cell
PT migration inhibitors, cell adhesion membranes or cell culture
PT bodies
PS Disclosure; Page 3; 9pp; Japanese.
CC The peptide sequence is an example of a highly generic sequence contg.
CC the RGD motif. Compounds contg. these lipid peptides are useful as
CC cell migration inhibitors in cell adhesion membranes or cell culture
CC bodies. See also R27027-33.
SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 5; Length 5;
Best Local Similarity 80.0%; Pred. No. 1.07e+03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5
   |||:|
Qy 1 GRGES 5

RESULT 109
ID R04610 standard; protein; 5 AA.
AC R04610;
DT 05-SEP-1990 (first entry)
DE Antiviral agent.
KW Antiviral; M2; poliovirus; polio; hepatitis.
OS Synthetic.
PN J02078631-A.
PD 19-MAR-1990.
PF 14-SEP-1988; 228843.
PR 14-SEP-1988; JP-228843.
PA (NIHA) Nippon Mining KK.
DR WPI: 90-129060/17.
PT Antiviral agent contg. tri:peptide (unit) -
PT of basic aminoacid, then alanine, glycine or sarcosine, and
PT acidic aminoacid, effective against virus with protein-terminated DNA
PT or RNA.
PS Disclosure; 4pp; Japanese.
CC Peptide is effective against inhibiting propagation of DNA or RNA
CC bonded, protein containing viruses eg. Poliovirus, Hepatitis virus.
SQ Sequence 5 AA;

Query Match 78.0%; Score 32; DB 1; Length 5;
Best Local Similarity 80.0%; Pred. No. 1.07e+03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5
   |||:|
Qy 1 GRGES 5

RESULT 110
ID R48653 standard; peptide; 6 AA.
AC R48653;
DT 21-SEP-1994 (first entry)
DE RGD containing peptide #2 for attaching cells to a solid carrier.
KW RGD; solid substrate; solid carrier; attachment; culture;
KW anchorage dependant cells; receptor; cell surface; release.
OS Synthetic.

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PN EP-587205-A.
PD 16-MAR-1994.
PF 19-JUL-1993; 202102.
PR 23-JUL-1992; EP-202261.
PA (DUIN ) DUPHAR INT RES BV.
PI Brands R. Sroek MC;
DR WPI; 94-085139/11.
PT Solid carrier for culture of anchorage dependent cells -
PT non-covalently coated with a polypeptide contained specific
PT sequence for easy attachment and detachment of cells.
PS Example 1; Page 3; 7pp; English.
CC The sequences given in R4852-54 are RGD containing peptides which
CC are used to coat a solid substrate in the production of a solid
CC carrier suitable for the attachment of cells. The peptide molecules
CC are directly bound to the substrate by a non-covalent linkage. The
CC solid carrier may be used for culturing anchorage dependant cells.
CC The epitope RGD is recognised by receptors on the cell surface for
CC cell attachment. The cells are subsequently released from the
CC carrier by simply lowering the pH of the growth medium to below 7,
CC optionally in the presence of trypsin. The ready release of the
CC cells from the solid carrier minimises the damage to cell surface
CC proteins.
CC proteins.
CC Sequence 6 AA;
SQ
Query Match 78.0%; Score 32; DB 9; Length 6;
Best Local Similarity 80.0%; Pred. No. 1.07e+03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 2 grgds 6
| | | | |
QY 1 GRGES 5

RESULT 111
ID R92858 standard; peptide; 6 AA.
AC R92858;
DT 03-OCT-1996 (first entry)
DE Fibronectin fragment IVa1b as positive control for cell adhesion.
KW Intercellular adhesion; stimulation; inhibition; skin graft;
KW synthetic blood vessel; coating; endothelial cell; epidermal cell;
KW chemotactic attractor; wound healing; organ transplantation;
KW thrombosis; arteriosclerosis; cancer metastases.
OS Synthetic.
FH Key Location/Qualifiers
FT modified_site 6
/Note= "C-terminal Cys residue for attaching
peptide to a carrier protein, e.g. BSA"
FT
FT DE4430601-A1.
PD 29-FEB-1996.
PF 22-AUG-1994; 430601.
PR 22-AUG-1994; DE-430601.
PA (BEIE ) BEIERSDORF AG.
PI Doerschner A, Eichner W, Kock K, Mielke H;
DR WPI; 96-130242/14.
PT Peptide(s) that stimulate or inhibit cell to cell adhesion - used
PT e.g. to coat synthetic blood vessels with endothelial cells, to
PT prepare, or increase growth of skin grafts, to prevent thrombosis
PT etc.
PS Example 1; Page 7; 18pp; German.
CC Peptides contg. the highly generic sequence AA5-AA4-AA3-AA2-AA1-(AAX)n
CC where AA5 is Glu, Ser, Asp or Asn; AA4 is Leu or Ser, AA3 is Leu, Ile,
CC Phe or Gly; AA2 is Asp, Leu, Asn or Ser; AA1 is Gly, Pro or Asp; AAX
CC is any amino acid and n = 0 or 1 are claimed; AA5 or AA5-AA4 may be
CC absent. When two or more such peptides are attached to a carrier, the
CC product can be used for stimulating adhesion of eukaryotic cells in
CC vitro. Particular applications include coating synthetic blood vessels
CC with endothelial cells, preparing skin grafts using epithelial cells
CC or stimulating wound healing. When a single peptide is used it may
CC inhibit intercellular adhesion, making it useful for preventing
CC thrombosis or arteriosclerosis or to suppress cancer metastases. The
CC peptides can also be used as chemotactic attractors and for detecting/
CC quantifying cell-cell adhesion in vitro.
CC The present sequence is a fragment of fibronectin which includes
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CC the Arg-Gly-Asp motif and which was used as a positive control in a
CC cell adhesion assay on the novel peptides.
SQ
Sequence 6 AA;
Query Match 78.0%; Score 32; DB 18; Length 6;
Best Local Similarity 80.0%; Pred. No. 1.07e+03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 1 grgds 5
| | | | |
QY 1 GRGES 5

RESULT 112
ID W79653 standard; peptide; 6 AA.
AC W79653;
DT 08-DEC-1998 (first entry)
DE Cyclo(1-alpha, 6-gamma)-Gly-Arg-Gly-Asp-Ser-Glu-NH2.
KW Platelet aggregation inhibitor; antithrombotic; antimetastatic; cyclic.
OS Synthetic.
FH Key Location/Qualifiers
FT modified_site 1..6
/Note= "the amino group of Gly(1) is condensed with
the gamma-carboxy of Glu(6) to give a cyclic molecule"
FT
FT Modified_site 2
/Note= "Arg or MeArg"
FT
FT US5643872-A.
PN 01-JUL-1997.
PD 26-AUG-1994; 296621.
PR 19-DEC-1990; US-630124.
PR 23-OCT-1989; US-425906.
PR 28-SEP-1990; US-590635.
PR 26-AUG-1994; US-296621.
PA (SMTK ) SMITHKLINE BEECHAM CORP.
PI Ali FE, Samanen JM;
DR WPI; 97-350267/32.
PT New peptide derivatives - are useful in inhibiting platelet
PT aggregation and clot formation, and for inhibiting reocclusion of
PT blood vessels following fibrinolytic therapy.
PS Disclosure: Column 7; 28pp; English.
CC The patent describes new cyclic peptides which have a core of formula
CC -B-Gly-Asp-, where B = a D- or L-amino acid chosen from Arg, Harg
CC (i.e. homoarginine), (Me2)Arg, (Et2)Arg and Lys (or an alpha-substituted
CC derivative of these). Cyclisation is effected through specific types of
CC covalent linkages. The cyclic peptides are platelet aggregation and clot
CC formation inhibitors. They may be used in treatment of acute myocardial
CC infarction, deep vein thrombosis, pulmonary embolism, dissecting
CC aneurysm, transient ischaemic attack, stroke, unstable angina,
CC disseminated intravascular coagulation, septicemia, surgical or
CC infectious shock, post-operative and post-partum trauma, cardiopulmonary
CC bypass surgery, incompatible blood transfusion, abruptio placenta,
CC thrombotic thrombocytopenic purpura, snake venom and immune diseases.
CC They may also be used for inhibiting reocclusion of blood vessels
CC following fibrinolytic therapy. They may also be used in prevention of
CC metastatic conditions.
CC The present sequence is a specific example of the new peptides.
SQ
Sequence 6 AA;
Query Match 78.0%; Score 32; DB 35; Length 6;
Best Local Similarity 80.0%; Pred. No. 1.07e+03;
Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 1 grgds 5
| | | | |
QY 1 GRGES 5

RESULT 113
ID W68569 standard; peptide; 6 AA.
AC W68569;
DT 25-JAN-1999 (first entry)
DE Conformationally constrained RGD peptide #6.
KW Cell adhesion motif; RGD motif; affinity; receptor; stereochemistry;
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KW conformation; cyclisation; medical device; prosthesis; implant;  
 KW cell attachment.  
 OS Synthetic.

PN US5827821-A.  
 PD 27-OCT-1998.  
 PF 16-JUL-1992; 914643.  
 PR 29-DEC-1988; US-292517.  
 PR 10-DEC-1987; US-131390.  
 PR 15-OCT-1991; US-776839.  
 PR 16-JUL-1992; US-914643.  
 PA (BURN-) BURNHAM INST.  
 PI Piersbacher MD, Ruoslahti ET;  
 DR WPI; 98-594031/30.  
 PT New synthetic peptides - used for in vivo applications such as  
 PT coating of medical devices, including prosthesis and implants, to  
 PT aid the attachment of cells  
 PS Disclosure; Column 5; 11pp; English.  
 CC This is an example of a novel type of peptide containing the cell  
 CC adhesion motif Arg-Gly-Asp (RGD) of formula: X-R1-R2-Arg-Gly-Asp-R3-R4-Y,  
 CC where R2 = 0-5 amino acids; R3 = 0-5 amino acids; R1, R4 = amino acids  
 CC connected by a bridge; X = H or one or more amino acids; and Y = OH, NH2  
 CC or one or more amino acids. Preferably the novel peptides have 5-30 amino  
 CC acid residues. The peptides have high affinity and specificity for their  
 CC receptors by virtue of restrictions on their stereochemical conformation,  
 CC restrictions which are provided by cyclisation. The peptides have various  
 CC applications relating to their cell-adhesion properties e.g. as coatings  
 CC of medical devices, including prosthesis and implants, to aid the  
 CC attachment of cells. The peptides also have in vitro uses in coating of  
 CC substrates, such as cell culture substrates, to promote cell adhesion.  
 SQ Sequence 6 AA;

Query Match 78.0%; Score 32; DB 37; Length 6;  
 Best Local Similarity 80.0%; Pred. No. 1.07e+03;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5  
 |||:|  
 QY 1 GRGES 5

RESULT 114  
 ID R39600 standard; peptide; 6 AA.  
 AC R39600;

DT 08-DEC-1993 (first entry)  
 DE Arg-Gly-Asp-contg. peptide.  
 KW LRI; beta-integrin; cytoadhesin; ligand-binding specificity;  
 KW polymorphonuclear neutrophil; integrin associated protein; IAP;  
 KW platelet glycoprotein gpIIB/IIIa; fibrinogen.  
 PN US5225531-A.  
 PD 06-JUL-1993.  
 PF 09-APR-1992; 866678.  
 PR 09-APR-1992; US-866678.  
 PA (UNIW ) UNIV WASHINGTON.  
 PI Adams SP, Brown EJ, Gresham HD;  
 DR WPI; 93-226662/28.  
 PT Peptide of lysine glycine alanine glycine aspartic acid valine  
 PT amino acid chain - comprises ligand for leukocyte response  
 PT integrin, inhibiting fibrinogen-dependent activation of  
 PT polymorphonuclear neutrophil  
 PS Disclosure; Column 2; 19pp; English.  
 CC A 15 amino acid peptide in the C-terminal region of the fibrinogen  
 CC gamma chain (384-411) which contains the sequence R39598 and  
 CC peptide GRGDSC (R39600) were investigated for their effect on  
 CC fibrinogen-stimulated ingestion of RIGG by polymorphonuclear  
 CC neutrophils (E19G are sheep erythrocytes opsonised with IgG). Both  
 CC GRGDSC and the 15 amino acid fibrinogen gamma peptide were capable  
 CC of abrogating fibrinogen-stimulated ingestion; neither had an  
 CC effect on the level of ingestion by unstimulated PMN.  
 SQ Sequence 6 AA;

Query Match 78.0%; Score 32; DB 8; Length 6;  
 Best Local Similarity 80.0%; Pred. No. 1.07e+03;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 grgds 5  
 |||:|  
 QY 1 GRGES 5

RESULT 115  
 ID R70482 standard; peptide; 6 AA.  
 AC R70482;  
 DT 20-DEC-1995 (first entry)  
 DE Cancer metastasis inhibitory RGD peptide derivative #10.  
 KW Cancer metastasis; adhesive peptide; core sequence; dextran; cancer;  
 KW water soluble polysaccharide; metastasis; wound; immunogenicity.  
 OS Synthetic.  
 PN J07089999-A.  
 PD 04-APR-1995.  
 PF 17-SEP-1993; 254779.  
 PR 17-SEP-1993; JP-254779.  
 PA (JAPG ) NIPPON ZEON KK.  
 DR WPI; 95-167354/22.  
 PT Cancer metastasis inhibitive peptide derivs. - useful for inhibition  
 PT of cancer metastasis, healing of wounds and regulation of  
 PT immunogenicity.  
 PS Disclosure; Page 2; 6pp; Japanese.  
 CC The peptides R70472-90 and R82907-24 are peptide derivatives which  
 CC inhibit cancer metastasis. They are composed of an adhesive peptide with  
 CC a core sequence selected from: RGD (R70472-85), YIGSR (R70486-90) or  
 CC other sequence (R82907-24), linked to a water soluble polysaccharide,  
 CC preferably a water soluble dextran, at the C-terminus. The peptides are  
 CC useful in inhibiting cancer metastasis, healing wounds and the regulation  
 CC of immunogenicity.  
 SQ Sequence 6 AA;

Query Match 78.0%; Score 32; DB 14; Length 6;  
 Best Local Similarity 80.0%; Pred. No. 1.07e+03;  
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 2 grgds 6  
 |||:|  
 QY 1 GRGES 5

RESULT 116  
 ID W56676 standard; peptide; 6 AA.  
 AC W56676;

DT 14-AUG-1998 (first entry)  
 DE Peptide derived from the heparin binding site of plasma fibrinogen.  
 KW Cell adhesion activity; heparin binding site; human;  
 KW plasma fibrinogen; inhibition; cancer metastasis.  
 OS Synthetic.  
 PN Homo sapiens.  
 PD EP-837074-A2.  
 PF 18-SEP-1997; 116293.  
 PR 19-SEP-1996; JP-248247.  
 PA (HISM ) HISAMITSU PHARM CO LTD.  
 PI Fukai F, Katayama T;  
 DR WPI; 98-219072/20.  
 PT Peptide(s) that inhibit cell adhesion - comprising fragments of  
 PT heparin-binding site of fibrinogen  
 PS Example 1; Page 12; 21pp; English.  
 CC Synthetic peptides W37820-24 and W56673-80 have cell adhesion inhibition  
 CC activity. All the peptides were modified with maleimide-activated  
 CC Keyhole Limpet Haemocyanine in order to improve their solubility.  
 CC The peptides are derived from a part of the heparin binding site of  
 CC human plasma fibrinogen. Peptide W56680 has the strongest cell  
 CC adhesion inhibition activity. The peptides are used for inhibiting  
 CC cancer metastasis.  
 SQ Sequence 6 AA;

Query Match 78.0%; Score 32; DB 31; Length 6;  
 Best Local Similarity 66.7%; Pred. No. 1.07e+03;  
 Matches 4; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 1 gredsp 6  
 ||:|  
 Qy 1 GRGESP 6

## RESULT 117

ID W68229 standard; peptide; 6 AA.

AC W6829;

DT 10-DEC-1998 (first entry)

DE Peptide useful for altering bone resorption.

KW bone resorption; pharmacore; angiogenesis; restenosis; integrin receptor;

KW alpha v beta 3 integrin receptor; osteoclast; cyclic.

OS Synthetic.

FH Key Location/Qualifiers

FT Modified\_site 6

FT /note= "C-terminal amide"

PN US5807819-A.

PD 15-SEP-1998.

PF 12-APR-1995; 421698.

PR 12-APR-1995; US-421698.

PR 15-APR-1994; US-227316.

PR 08-SEP-1994; US-303052.

PA (LJOL-) LA JOLLA CANCER RES CENT.

PI Cheng S, Ingram R, Mullen D, Tschopp JF;

DR WPI; 98-555601/47.

PT Use of peptide derivatives which can alter integrin receptor binding

PT - for altering bone resorption, treating angiogenesis or restenosis

PT and altering integrin receptor mediated interactions

PS Example 2; Figure 2b; 87pp; English.

CC A new method is claimed for altering bone resorption. It comprises

CC administration of a peptide of formula:  $\text{X1X2X3X4GX5X6X7X8}$ ; where X1 =

CC R1R2N or 0-10 amino acids (optionally protected by acetylation at the N-

CC terminus); X2 = absent or 1 amino acid; X3 = absent or 1 or 2 amino

CC acids; X4 = N-Me-Arg; X5 = residue which provides an ionic interaction

CC with an integrin receptor, or is Msa, Psa or Ifsa; X6 = residue which

CC has an aliphatic side chain; a non-natural amino acid that is

CC hydrophobic; or Thr; X7 = a residue capable of forming a bond (i) with a

CC bridging amino acid of X2, (ii) with X3 when X2 is absent, or (iii) with

CC X4 when X2 and X3 are absent, to conformationally restrain the peptide;

CC X8 = NR3R4; OR5; or 0-10 amino acids, optionally protected as an amide at

CC the C-terminus; R1, R3-R5 = H or alkyl; R2 = H, alkyl, alkyl-CO or

CC phenyl-CO. The peptides are useful for inhibiting bone resorption,

CC angiogenesis or restenosis, and for altering integrin receptor-mediated

CC interactions, especially alpha v beta 3 integrin receptor-mediated

CC binding of cells to a matrix. They may be used for reducing or inhibiting

CC osteoclast binding to a matrix. The present sequence represents an

CC example of a circular peptide disclosed in the specification.

SQ Sequence 6 AA;

Query Match 75.6%; Score 31; DB 36; Length 6;

Best Local Similarity 60.0%; Pred. No. 1.42e+03;

Matches 3; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 1 rgdtp 5

||:|

Qy 2 RGESP 6

## RESULT 118

ID R96377 standard; peptide; 6 AA.

AC R96377;

DT 05-JUL-1996 (first entry)

DE RGD cyclic peptide, TL#366, binds alpha-v,beta3 integrin receptor.

KW RGD-containing peptide; alpha-v, beta-3 integrin receptor; osteoclast;

KW matrix; bone; inhibition; bone resorption; promote; endothelial cell;

KW smooth muscle cell; restenosis; angiogenesis; cyclic.

OS Synthetic.

FH Key Location/Qualifiers

FT modified\_site 1

FT /note= "forms lactam bridge with Glu(6)"

FT modified\_site 6

FT /note= "forms lactam bridge with Arg(1), amidated

FT

FT WO9528426-A2. C-terminal"

PN 26-OCT-1995.

PD 12-APR-1995; U04741.

PR 13-APR-1994; US-227316.

PR 08-SEP-1994; US-303052.

PA (LJOL-) LA JOLLA CANCER RES FOUND.

PI Cheng S, Ingram R, Mullen D, Tschopp J;

DR WPI; 95-373767/48.

PT Altering alpha-v, beta-3 integrin receptor-mediated binding of cell

PT to matrix - using conformationally restrained peptide of RGD type.

PT e.g. for treating inappropriate angiogenesis or for inhibiting bone

PT resorption

PS Claim 85; Page 79; 99pp; English.

CC The sequences given in R96301-417 are non-naturally occurring RGD-

CC containing peptides which alter the alpha-v, beta-3 integrin receptor

CC binding of a cell to a matrix, such as the binding of an osteoclast to

CC a matrix such as bone. These peptides inhibit bone resorption and can

CC inhibit or promote alpha-v, beta-3-mediated cell attachment depending

CC on whether they are present in the cell in a soluble form or are bound

CC to a solid substrate. These peptides can be used in the amelioration

CC of the severity of a pathology involving alpha-v, beta-3 receptor-

CC mediated binding of a cell, such as an osteoclast, endothelial cell or

CC smooth muscle cell to a matrix. They are used for treating conditions

CC associated with restenosis or inappropriate or insufficient angiogenesis,

CC or for inhibiting osteoclast binding to the matrix.

SQ Sequence 6 AA;

Query Match 75.6%; Score 31; DB 16; Length 6;

Best Local Similarity 60.0%; Pred. No. 1.42e+03;

Matches 3; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 1 rgdtp 5

||:|

Qy 2 RGESP 6

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